CANADA

DEPARTMENT OF MINES AND TECHNICAL SURVEYS

Dominion Observatories

PUBLICATIONS

of the

DOMINION OBSERVATORY

OTTAWA

Volume XV

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QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1961

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CANADA
DEPARTMENT OF MINES AND RESOURCES
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PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

VOL. XV, NO. 1

Catalogue of 2436 Stars from Observations with the Reversible Meridian Circle, made at the Dominion Observatory, Ottawa, during the Years 1911-1923

BY

W. S. McCLENAHAN

OTTAWA
EDMOND CLOUTIER, C.M.G., B.A., L.Ph.,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
CONTROLLER OF STATIONERY
1949

PUBLICATIONS OF THE DOMINION OBSERVATORY
VOL. XV NO. 1

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BY

W. S. McCLENAHAN

ABSTRACT

This catalogue is the result of observations taken at Ottawa between the years 1911 and 1923. Primarily the program was undertaken to improve star positions needed in carrying out field observations for latitude and longitude in Canada. Right ascensions are determined differentially with a selected list of stars from Boss P.G.C. used as the fundamental catalogue. Declinations were computed from nadir readings with 45° 23′ 39″·0 used as a provisional latitude of the meridian circle. No correction for flexure was applied and Pulkowa refraction tables were used. Corrections for variation of latitude were taken from values given by the International Latitude Variation stations. Tables of pivot errors, circle division errors, etc., are given. Clamp errors were investigated and a solution from pole stars at upper and lower culmination gave as a correction to the provisional latitude used

$$\phi = 45° 23' 38''\cdot 67$$

A reversing prism was used with the eye-piece throughout the work. Tables give comparisons of the Ottawa values with those of Boss P.G.C., Eichelberger's positions for 1925 and the First Greenwich Catalogue for 1925·0.

INTRODUCTION

The Meridian Circle in use at Ottawa was made by Troughton and Simms. A description of it and the many difficulties overcome to get it mounted are given in the Report of the Chief Astronomer for the years 1908, 1909, 1910 and 1911. The observations were started in 1911 and completed in 1923. The list comprised:

(1) One hundred and eighty clock stars in a belt approximately twenty degrees north and south of the equator.

(2) Twenty-one azimuth stars, over 80° declination.

(3) Two hundred and fifty-four standard stars distributed amongst nearly 2,000 stars for which recent observations were needed.

During these years the meridian circle observations were the basis of the time service, and the longitude observations throughout Canada consequently were based on the meridian circle. The work throughout most of these years was under the direction of Mr. R. Meldrum Stewart, M.A., who had complete charge of bringing the meridian circle into operation, the development of the program of observing, and who took a regular part in the night observations. Mr. C. C. Smith, B.A., was in charge of the division from 1921 to the time of his retirement in 1937. He carried out much of the work of investigating various errors connected with the declinations and right ascensions. Mr. D. B. Nugent, M.A., was associated with the work from its beginning, and observed up to 1923, as well as doing considerable work on the right ascension computations. R. J. McDiarmid, Ph.D., joined the staff in 1911 and observed throughout most of the years of the program, besides taking a major part in the right ascension computations. W. S. McClenahan, B.A., joined the staff in 1914 and observed from that time on except for a period of three years during the First Great War.

To the above five men goes the credit of taking observations and doing a great part of the computing. Others who assisted in the computations were Messrs. W. C. Jaques, M.A., E. C. Arbogast, M.A., and A. H. Swinburn. Mr. Dave Robertson assisted mostly in the scaling, and since his death Miss K. C. Nevins has done this work and assisted in

other computing. Much of the computing had been completed for some years, but there were certain errors, such as clamp differences, correction to the provisional latitude, and other errors, about which no definite decision had been made. These have been cleared up in the past year or two and the list of stars prepared for publication. Mr. E. G. Woolsey, B.Sc., who joined the staff in 1946, has assisted in this latter part of the work.

Right Ascensions

The mean places of the clock and azimuth stars were computed from Boss' Preliminary General Catalogue for each year. The right ascensions for the date required were computed, except for eight stars, from the American Ephemeris and corrected by the difference between (mean place from Boss) and (mean place from American Ephemeris). The other eight stars were taken from other ephemerides and corrected in a similar manner. Boss' proper motions were used except for the fraction of a year up to the date of observation. Corrections for short-period terms were also applied. No results for right ascension were retained unless at least six clock stars, distributed over a period of three hours, were observed by the same observer. Table I is a list of clock stars used.

TABLE I

No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Boss -Ottawa	No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Boss -Ottawa
			° ′	h m s	s				° ′	h m s	s
F 1	γ Pegasi	2·9	+14 46·0	0 9 22·270	+0·004	F 34	ε Tauri	3·6	+19 0·9	24 14·060	+ ·026
F 2	ι Ceti	3·7	− 9 14·4	15 36·394	+ ·016	F 35	α Tauri	0·9	+16 21·6	31 36·883	+ ·022
F 3	13 Ceti	5·4	− 4 0·3	31 23·209	− ·006	F 36	μ Eridani	4·2	− 3 23·4	41 45·072	+ ·003
F 4	δ Piscium	4·6	+ 7 10·6	44 47·352	− ·007	F 37	π^5 Orionis	3·8	+ 2 19·1	50 20·578	+ ·011
F 5	20 Ceti	5·0	− 1 33·0	49 10·409	− ·016	F 38	β Eridani	2·8	− 5 10·9	5 4 9·699	+ ·020
F 6	ε Piscium	4·5	+ 7 29·2	59 2·904	+ ·010	F 39	β Orionis	0·0	− 8 17·2	10 55·983	− ·007
F 7	η Ceti	3·5	−10 34·8	1 4 48·997	− ·019	F 40	τ Orionis	3·7	− 6 55·4	13 57·835	·000
F 8	89 Piscium	5·4	+ 3 13·2	13 55·701	− ·002	F 41	γ Orionis	1·6	+ 6 17·0	21 6·460	− ·007
F 9	θ Ceti	3·7	− 8 34·2	20 16·449	− ·009	F 42	δ Orionis	2·2	− 0 21·2	28 10·455	+ ·004
F 10	η Piscium	3·8	+14 57·6	27 27·990	+ ·023	F 43	ε Orionis	1·6	− 1 15·0	32 24·453	− ·018
F 11	ν Piscium	4·7	+ 5 6·5	37 31·567	+ ·001	F 44	κ Orionis	2·1	− 9 41·7	44 11·931	+ ·014
F 12	ο Piscium	4·4	+ 8 46·8	41 25·812	+ ·005	F 45	α Orionis	0·1–1·2	+ 7 23·7	51 6·673	+ ·001
F 13	ζ Ceti	3·8	−10 42·3	47 45·451	+ ·015	F 46	ν Orionis	4·4	+14 46·7	6 3 17·367	+ ·009
F 14	ξ Piscium	4·8	+ 2 49·1	49 40·248	− ·004	F 47	5 Monocerotis	4·2	− 6 15·0	11 11·861	− ·007
F 15	β Arietis	2·7	+20 26·5	50 29·556	+ ·004	F 48	8 Monocerotis	4·5	+ 4 37·9	19 47·608	+ ·029
F 16	ξ^1 Ceti	4·6	+ 8 29·7	2 9 1·317	− ·016	F 49	10 Monocerotis	5·0	− 4 42·9	24 15·373	− ·017
F 17	θ Arietis	5·7	+19 33·3	13 56·969	− ·007	F 50	γ Geminorum	1·8	+16 27·9	33 22·795	+ ·008
F 18	ξ^2 Ceti	4·4	+ 8 7·5	24 10·114	− ·005	F 51	ξ Geminorum	3·3	+12 58·7	41 4·829	+ ·008
F 19	δ Ceti	4·1	+ 0 0·3	35 38·165	·000	F 52	θ Canis Majoris	4·2	−11 56·6	50 42·321	+ ·007
F 20	μ Ceti	4·3	+ 9 48·0	40 53·098	− ·016	F 53	ζ Geminorum	3·7–4·3	+20 40·9	59 39·721	+ ·005
F 21	η Eridani	4·0	− 9 11·7	52 45·760	− ·014	F 54	γ Canis Majoris	4·1	−15 31·3		
F 22	α Ceti	2·7	+ 3 47·8	58 21·397	− ·011	F 55	22 Monocerotis	4·1	− 0 22·0	7 8 2·084	+ ·027
F 23	δ Arietis	4·6	+19 26·6	3 7 20·171	+ ·011	F 56	λ Geminorum	3·5	+16 40·6	13 47·051	− ·004
F 24	ο Tauri	3·6	+ 8 46·0	20 46·467	+ ·007	F 57	β Canis Minoris	3·1	+ 8 26·5	23 5·094	− ·013
F 25	5 Tauri	4·4	+12 40·8	26 43·755	− ·006	F 58	6 Canis Majoris	4·9	+12 9·8	25 37·383	+ ·010
F 26	ε Eridani	3·7	− 9 42·7	29 23·740	+ ·021	F 59	25 Monocerotis	5·2	− 3 56·5	33 32·967	+ ·009
F 27	δ Eridani	3·7	−10 1·0	39 39·236	+ ·018	F 60	α Canis Minoris	0·5	+ 5 25·1	35 22·626	+ ·045
F 28	γ Eridani	3·1	−13 43·2	54 31·751	+ ·019	F 61	9 Puppis	5·3	−13 41·9	48 17·936	− ·002
F 29	λ Tauri	3·5	+12 16·8	56 31·349	− ·005	F 62	8 Cancri	5·2	+13 20·0	8 0 53·931	− ·003
F 30	ν Tauri	4·0	+ 5 47·0	59 9·867	− ·008	F 63	β Cancri	3·7	+ 9 25·1	12 26·972	− ·011
F 31	ο Eridani	4·2	− 7 2·0	4 8 12·187	− ·003	F 64	30 Monocerotis	3·9	− 3 39·6	21 54·817	+ ·012
F 32	γ Tauri	3·8	+15 26·9	15 31·382	− ·022	F 65	β Hydrae	4·2	+ 5 58·0	33 41·220	+ ·003
F 33	δ Tauri	4·0	+17 22·1	18 36·398	+ ·016	F 66	δ Cancri	4·1	+18 25·9	40 25·542	− ·003

TABLE I—*Concluded*

No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Boss -Ottawa
			° ′	h m s	s
F 67	ζ Hydrae	3·3	+ 6 13·9	51 25·845	·000
F 68	α Cancri	4·3	+12 8·9	54 23·236	+ ·028
F 69	κ Cancri	5·1	+10 58·3	9 3 41·206	+ ·024
F 70	θ Hydrae	3·8	+ 2 37·9	10 27·828	− ·002
F 71	α Hydrae	2·2	− 8 20·0	23 54·146	− ·003
F 72	ι Hydrae	4·1	− 0 48·1	36 1·602	+ ·005
F 73	ο Leonis	3·8	+10 14·1	37 9·001	− ·012
F 74	π Leonis	4·9	+ 8 24·3	56 15·101	+ ·002
F 75	η Leonis	3·6	+17 7·6	10 3 14·796	·000
F 76	α Leonis	1·3	+12 20·1	4 22·796	+ ·017
F 77	λ Hydrae	3·8	−11 59·0	6 55·913	− ·019
F 78	22 Sextantis	5·5	− 7 41·6	13 54·202	− ·020
F 79	μ Hydrae	4·1	−16 27·2		
F 80	ρ Leonis	3·8	+ 9 41·6	28 51·837	− ·001
F 81	1 Leonis	5·3	+10 56·5	45 19·003	+ ·008
F 82	d Leonis	5·0	+ 4 1·2	56 41·288	− ·019
F 83	χ Leonis	4·7	+ 7 44·5	11 1 8·971	− ·014
F 84	θ Leonis	3·4	+15 50·4	10 18·394	− ·003
F 85	δ Crateris	3·8	−14 22·4	15 35·372	+ ·003
F 86	σ Leonis	4·1	+ 6 26·4	17 16·200	+ ·005
F 87	ν Leonis	4·5	− 0 24·6	33 6·504	+ ·003
F 88	β Leonis	2·2	+14 59·5	45 14·151	− ·005
F 89	β Virginis	3·8	+ 2 11·2	46 47·311	+ ·002
F 90	π Virginis	4·6	+ 7 1·9	57 1·799	− ·002
F 91	ο Virginis	4·2	+ 9 9·0	12 1 23·350	+ ·011
F 92	η Virginis	4·0	− 0 15·0	16 4·101	− ·010
F 93	δ Corvi	3·1	−16 5·9	25 58·842	+ ·021
F 94	24 Comae Seq.	5·2	+18 47·4	31 22·129	+ ·026
F 95	χ Virginis	4·8	− 7 35·0	35 22·400	+ ·009
F 96	δ Virginis	3·7	+ 3 48·3	51 49·486	− ·008
F 97	ε Virginis	3·0	+11 21·7	58 26·582	+ ·033
F 98	θ Virginis	4·4	− 5 8·3	13 6 3·875	− ·001
F 99	σ Virginis	5·0	+ 5 51·9	13 48·990	− ·009
F 100	α Virginis	1·2	−10 46·2	21 14·376	− ·013
F 101	ζ Virginis	3·4	− 0 12·8	30 52·238	− ·041
F 102	τ Bootis	4·5	+17 49·8	43 41·882	− ·001
F 103	η Bootis	2·8	+18 46·4	51 6·808	+ ·011
F 104	τ Virginis	4·3	+ 1 54·4	57 49·670	+ ·016
F 105	κ Virginis	4·3	− 9 55·5	14 8 53·509	+ ·015
F 106	α Bootis	0·2	+19 34·3	12 14·415	− ·004
F 107	λ Virginis	4·6	−13 1·6	15 2·880	− ·001
F 108	φ Virginis	5·0	− 1 53·5	24 20·159	+ ·009
F 109	μ Virginis	4·0	− 5 20·0	39 6·317	·000
F 110	109 Virginis	3·8	+ 2 12·5	42 27·311	+ ·013
F 111	α^2 Librae	2·9	−15 43·9	46 43·547	+ ·005
F 112	δ Librae	4·8–6·2	− 8 13·3	56 57·762	+ ·033
F 113	β Librae	2·7	− 9 6·4	15 12 58·078	+ ·022
F 114	γ Librae	4·0	−14 32·4	31 19·661	− ·001
F 115	α Serpentis	2·8	+6 39·6	40 34·363	− ·022
F 116	β Serpentis	3·7	+15 39·3	42 43·504	+ ·018
F 117	μ Serpentis	3·6	− 3 12·1	45 42·240	+ ·002
F 118	ε Serpentis	3·8	+ 4 42·2	47 4·552	− ·010
F 119	γ Serpentis	3·9	+15 54·3	52 59·241	+ ·016
F 120	δ Ophiuchi	3·0	− 3 30·1	16 10 24·809	− ·021
F 121	ε Ophiuchi	3·3	− 4 30·5	14 21·071	− ·026
F 122	γ Herculis	3·8	+19 19·7	18 36·649	− ·012
F 123	β Herculis	2·8	+21 39·1	26 59·702	− ·027
F 124	ζ Ophiuchi	2·7	−10 25·0	33 1·602	− ·011
F 125	κ Ophiuchi	3·4	+ 9 29·4	54 7·014	+ ·013
F 126	η Ophiuchi	2·6	−15 38·0	17 6 4·511	− ·009
F 127	σ Ophiuchi	4·4	+ 4 12·2	22 47·548	− ·001
F 128	α Ophiuchi	2·1	+12 36·8	31 27·114	+ ·014
F 129	β Ophiuchi	2·9	+ 4 35·8	39 46·000	+ ·009
F 130	γ Ophiuchi	3·7	+ 2 44·1	44 7·873	− ·003
F 131	ν Ophiuchi	3·5	− 9 45·9	54 53·974	+ ·020
F 132	67 Ophiuchi	3·9	+ 2 56·0	56 53·277	+ ·020
F 133	72 Ophiuchi	3·7	+ 9 33·1	18 3 47·601	·000
F 134	η Serpentis	3·4	− 2 55·2	17 25·705	− ·010
F 135	γ Scuti	4·7	−14 36·9	24 55·363	+ ·007
F 136	1 Aquilae	4·1	− 8 17·9	31 7·509	+ ·015
F 137	2 Aquilae	4·7	− 9 7·5	38 10·025	+ ·015
F 138	6 Aquilae	4·5	− 4 49·8	43 11·716	− ·018
F 139	θ Serpentis pr.	4·5	+ 4 6·3	52 29·458	+ ·002
F 140	ε Aquilae	4·2	+14 57·9	56 13·109	− ·049
F 141	λ Aquilae	3·6	− 4 59·8	19 2 16·130	+ ·006
F 142	ω Aquilae	5·1	+11 27·5	14 17·765	− ·014
F 143	δ Aquilae	3·4	+ 2 57·8	21 43·021	+ ·001
F 144	π Aquilae	5·0	− 7 11·7	32 51·436	·000
F 145	γ Aquilae	2·8	+10 25·8	42 41·635	+ ·010
F 146	δ Sagittae	3·8	+18 20·9	44 2·587	+ ·005
F 147	α Aquilae	0·9	+ 8 40·1	47 7·462	− ·010
F 148	β Aquilae	3·9	+ 6 13·1	51 37·753	− ·014
F 149	γ Sagittae	3·7	+19 17·2	55 25·282	− ·007
F 150	θ Aquilae	3·4	− 1 2·7	20 7 26·153	− ·003
F 151	α^2 Capricorni	3·8	−12 46·7		
F 152	β Capricorni	3·2	−15 1·2	16 47·956	− ·009
F 153	ε Delphini	4·0	+11 2·8	29 37·780	+ ·018
F 154	β Delphini	3·7	+14 20·0	34 1·920	− ·011
F 155	α Delphini	3·9	+15 38·8	36 9·252	+ ·007
F 156	ε Aquarii	3·8	− 9 46·3	43 37·039	+ ·006
F 157	μ Aquarii	4·8	− 9 15·9	48 36·612	− ·012
F 158	ν Aquarii	4·5	−11 40·6	21 5 30·620	+ ·022
F 159	α Equulei	4·1	+ 4 56·2	12 4·514	+ ·002
F 160	1 Pegasi	4·2	+19 29·0	18 37·032	− ·006
F 161	β Aquarii	3·1	− 5 54·1	27 36·721	− ·008
F 162	ξ Aquarii	4·8	− 8 11·5	33 45·645	− ·005
F 163	ε Pegasi	2·5	+ 9 31·8	40 30·128	− ·001
F 164	δ Capricorn	3·0	−16 28·1	42 54·227	− ·004
F 165	μ Capricorn	5·2	−13 54·3	49 12·556	− ·006
F 166	α Aquarii	3·2	− 0 41·1	22 1 55·961	− ·018
F 167	θ Pegasi	3·7	+ 5 49·7	6 24·988	+ ·011
F 168	θ Aquarii	4·3	− 8 9·4	12 52·653	− ·024
F 169	γ Aquarii	4·0	− 1 45·9	17 46·957	+ ·015
F 170	σ Aquarii	4·9	−11 3·7	26 40·763	+ ·022
F 171	η Aquarii	4·1	− 0 30·3	31 30·169	+ ·012
F 172	ζ Pegasi	3·6	+10 26·4	37 43·246	− ·001
F 173	λ Aquarii	3·5	− 7 58·7	48 42·181	+ ·016
F 174	α Pegasi	2·6	+14 48·1	23 1 1·402	·000
F 175	φ Aquarii	4·4	− 6 27·2	10 26·332	− ·030
F 176	γ Piscium	3·8	+ 2 52·3	13 16·617	− ·013
F 177	κ Piscium	4·9	+ 0 50·7	23 5·245	+ ·005
F 178	ι Piscium	4·3	+ 5 13·2	36 5·501	− ·001
F 179	φ Pegasi	5·2	+18 42·2	48 40·137	+ ·025
F 180	ω Piscium	4·0	+ 6 26·9	55 27·517	+ ·010

TABLE II

Δ α (BOSS — OTTAWA) (from Clock Stars)

h h	s	h h	s	h h	s
0 — 1	−.002	8 — 9	·004	16 — 17	−·014
1 — 2	·002	9 — 10	·002	17 — 18	·007
2 — 3	−·010	10 — 11	−·006	18 — 19	−·005
3 — 4	·007	11 — 12	−·001	19 — 20	−·003
4 — 5	·008	12 — 13	·011	20 — 21	−·001
5 — 6	·001	13 — 14	−·005	21 — 22	−·001
6 — 7	·005	14 — 15	·009	22 — 23	·004
7 — 8	·010	15 — 16	·004	23 — 24	−·001

The accidental differences between the right ascensions of Boss and the Ottawa ledgers as shown in Table I are in all cases small, while Table II indicates that these differences are not in any way dependent on right ascension. The Ottawa places are, however, affected by the periodic errors in right ascension introduced through the medium of the mean places of Boss.

The collimation error was measured before and after each series of observations. In making observations for the coincidence of the north collimator on the south mark (1911 to 1920) or the south collimator on the north collimator (1920-1923) the view was taken through the pierced cube of the meridian circle.

Ten readings of the micrometer of the north collimator on the south mark were taken and the north collimator was set at the mean of these readings just prior to the observations of the collimator and the mark with the meridian circle. In 1920 a collimator was mounted on the pier south of the meridian circle. Ten readings were made by the micrometer of the south collimator on the north collimator and the former was set at the mean of the readings in order to set the wire systems of the one with the other. Observations on these collimators were then made with the meridian circle.

Readings of the twenty contacts, for the transit micrometer, both the make and the break, were generally taken once a month, and from these readings the mean of the contacts and the width of the contact strip were determined. Denoting the mean of these readings by M and the reading for the line of collimation by C the following formulae give the collimation errors,

$$\text{Cl. E.} \qquad c = (C - M)\ R - {}^{s}\cdot 0023$$

$$\text{Cl. W.} \qquad c = (M - C)\ R + {}^{s}\cdot 0018$$

where the constants are corrections for pivot irregularities and R is the micrometer value.

The collimation error used was the mean of the two determinations made at the start and the end of a night's work. In the computations of the stars, the collimation error, diurnal aberration, pivot error, and one-half strip width, were applied as one error. The error of collimation is positive when a positive correction has to be added to the time of transit of a star at upper culmination.

The value of one revolution of the right ascension micrometer is $3^{s}\cdot 217$.

Considerable difficulty with the pivots was experienced and an account of this is contained in the Report of the Chief Astronomer for 1909. Pivot errors were measured in 1912 by R. M. Stewart and C. C. Smith and the following is a table of these errors applied as a correction to the collimation. Pivot errors have been measured since then and it was not found necessary to change the original values. The method used was similar to the one used at the Cape of Good Hope Observatory, only at Ottawa each pivot was measured separately.

TABLE III.—PIVOT ERRORS

Clamp East		Clamp West		Clamp East		Clamp West	
W. Pointer	Δ c	E. Pointer	Δ c	W. Pointer	Δ c	E. Pointer	Δ c
° ′		° ′		° ′		° ′	
269 07		269 02			s −0·002		s 0·002
	s 0·002		s −0·002	333 02		332 57	
271 02		270 57		334 52	− ·001	334 47	·001
	·001		− ·001		·000		·000
272 57		272 52		336 37		336 32	
	·000		·000		·001		− ·001
274 52		274 47		338 27		338 22	
	− ·001		·001		·002		− ·002
276 52		276 47		340 12		340 07	
	− ·002		·002		·003		− ·003
278 52		278 47		341 57		341 52	
	− ·003		·003		·004		− ·004
280 52		280 47		343 42		343 37	
	− ·004		·004		·005		− ·005
283 02		282 57		345 32		345 27	
	− ·005		·005		·006		− ·006
285 22		285 17		347 27		347 22	
	− ·006		·006		·007		− ·007
287 52		287 47		349 27		349 22	
	− ·007		·007		·008		− ·008
290 42		290 37		351 37		351 32	
	− ·008		·008		·009		− ·009
294 07		294 02		354 02		353 57	
	− ·009		·009		·010		− ·010
298 57		298 52		356 52		356 47	
	− ·010		·010		·011		− ·011
311 42		311 37		0 52		0 47	
	− ·009		·009		·012		− ·012
316 27		316 22		11 07		11 02	
	− ·008		·008		·011		− ·011
319 47		319 42		14 52		14 47	
	− ·007		·007		·010		− ·010
322 32		322 27		17 27		17 22	
	− ·006		·006		·009		− ·009
324 57		324 52		19 32		19 27	
	− ·005		·005		·008		− ·008
327 12		327 07		21 27		21 22	
	− ·004		·004		·007		− ·007
329 12		329 07		23 07		23 02	
	− ·003		·003		·006		− ·006
331 12		331 07		24 42		24 37	
	− ·002		·002		·005		− ·005

TABLE III.—PIVOT ERRORS—*Continued*

Clamp East		Clamp West		Clamp East		Clamp West	
W. Pointer	Δ c	E. Pointer	Δ c	W. Pointer	Δ c	E. Pointer	Δ c
° ′	s	° ′	s	° ′	s	° ′	s
	0·005		−0·005		−0·006		0·006
26 12		26 07		80 22		80 17	
	·004		− ·004		− ·005		·005
27 37		27 32		81 42		81 37	
	·003		− ·003		− ·004		·004
29 02		28 57		82 57		82 52	
	·002		− ·002		− ·003		·003
30 22		30 17		84 17		84 12	
	·001		− ·001		− ·002		·002
31 42		31 37		85 32		85 27	
	·000		·000		− ·001		·001
33 02		32 57		86 47		86 42	
	− ·001		·001		·000		·000
34 17		34 12		88 02		87 57	
	− ·002		·002		·001		− ·001
35 37		35 32		89 17		89 12	
	− ·003		·003		·002		− ·002
36 57		36 52		90 32		90 27	
	− ·004		·004		·003		− ·003
38 17		38 12		91 52		91 47	
	− ·005		·005		·004		− ·004
39 37		39 32		93 12		93 07	
	− ·006		·006		·005		− ·005
40 57		40 52		94 37		94 32	
	− ·007		·007		·006		− ·006
42 27		42 22		96 02		95 57	
	− ·008		·008		·007		− ·007
43 57		43 52		97 32		97 27	
	− ·009		·009		·008		− ·008
45 32		45 27		99 12		99 07	
	− ·010		·010		·009		− ·009
47 17		47 12		100 57		100 52	
	− ·011		·011		·010		− ·010
49 12		49 07		102 57		102 52	
	− ·012		·012		·011		− ·011
51 32		51 27		105 17		105 12	
	− ·013		·013		·012		− ·012
54 37		54 32		108 17		108 12	
	− ·014		·014		·013		− ·013
65 32		65 27		122 12		122 07	
	− ·013		·013		·012		− ·012
68 37		68 32		125 22		125 17	
	− ·012		·012		·011		− ·011
70 57		70 52		127 57		127 52	
	− ·011		·011		·010		− ·010
72 47		72 42		130 12		130 07	
	− ·010		·010		·009		− ·009
74 32		74 27		132 17		132 12	
	− ·009		·009		·008		− ·008
76 07		76 02		134 07		134 02	
	− ·008		·008		·007		− ·007
77 37		77 32		135 57		135 52	
	− ·007		·007		·006		− ·006
79 02		78 57		137 42		137 37	
	− ·006		·006		·005		− ·005

TABLE III.—PIVOT ERRORS—*Concluded*

Clamp East		Clamp West		Clamp East		Clamp West	
W. Pointer	Δ c	E. Pointer	Δ c	W. Pointer	Δ c	E. Pointer	Δ c
° ′	s	° ′	s	° ′	s	° ′	s
	0·005		−0·005		−0·003		0·003
139 22		139 17		207 07		207 02	
	·004		− ·004		− ·002		·002
141 02		140 57		208 57		208 52	
	·003		− ·003		− ·001		·001
142 42		142 37		210 52		210 47	
	·002		− ·002		·000		·000
144 22		144 17		212 37		212 32	
	·001		− ·001		·001		− ·001
146 02		145 57		214 27		214 22	
	·000		·000		·002		− ·002
147 42		147 37		216 22		216 17	
	− ·001		·001		·003		− ·003
149 27		149 22		218 12		218 07	
	− ·002		·002		·004		− ·004
151 12		151 07		220 12		220 07	
	− ·003		·003		·005		− ·005
152 57		152 52		222 12		222 07	
	− ·004		·004		·006		− ·006
154 52		154 47		224 22		224 17	
	− ·005		·005		·007		− ·007
156 52		156 47		226 47		226 42	
	− ·006		·006		·008		− ·008
159 02		158 57		229 27		229 22	
	− ·007		·007		·009		− ·009
161 22		161 17		232 42		232 32	
	− ·008		·008		·010		− ·010
163 57		163 52		237 37		237 32	
	− ·009		·009		·011		− ·011
167 07		167 02		247 22		247 17	
	− ·010		·010		·010		− ·010
171 22		171 17		252 17		252 12	
	− ·011		·011		·009		− ·009
186 27		186 22		255 37		255 32	
	− ·010		·010		·008		− ·008
190 42		190 37		258 22		258 17	
	− ·009		·009		·007		− ·007
193 52		193 47		260 47		260 42	
	− ·008		·008		·006		− ·006
196 37		196 32		263 02		262 57	
	− ·007		·007		·005		− ·005
198 57		198 52		265 07		265 02	
	− ·006		·006		·004		− ·004
201 12		201 07		267 07		267 02	
	− ·005		·005		·003		− ·003
203 12		203 07		269 07		269 02	
	− ·004		·004		·002		− ·002
205 12		205 07		271 02		270 57	
	− ·003		·003				

The level error was determined by a nadir observation. Using a Bohnenberger eye piece, the image of the travelling wire of the right ascension micrometer, reflected in a basin of mercury, was made to coincide with the image of the wire itself. Readings for

level error were always taken at the beginning and end of a night's work at least. Denoting the above reading by L the following formulae give the level errors.

$$\text{Cl. E.} \qquad b = (C - L)\ R - {}^{s}\cdot 0135$$
$$\text{Cl. W.} \qquad b = (L - C)\ R + {}^{s}\cdot 0130$$

where the constants are corrections for pivots. The level error is positive when the western end of axis is too high. The mean of the two or more determinations was used as the level error for the night.

To determine the azimuth error six clock stars along with two azimuth stars at upper culmination and two at lower culmination were observed whenever possible. Two azimuth marks were also used to keep a check on the azimuth of the instrument. Readings with the transit micrometer on these marks were taken at the beginning and end of each night's work so that the azimuth of the line joining the marks was known. From 1911 to 1922 weights were assigned to these values according to the number of polars observed during the night's work, and a weighted mean value adopted, usually over a period of one month. A correction was then applied to each night's work.

The marks, as observed by the telescope, consist each of a small hole in a plate illuminated by an electric light, and mounted so that they in turn can be referred to the optical centre of a lens mounted at the base of the pier. From 1923 all azimuth readings are referred to these two points underground and corrections applied as above.

A comparison between azimuth error determined from upper and lower culminating polars was made with the following result.

$$a_u - a_l = -\ {}^{s}\cdot 04$$

The azimuth error is positive when the western end of the axis is too far south.

The following stars were used to determine the azimuth error of the meridian circle.

TABLE IV.—AZIMUTH STARS

Compiled from Observations 1911-23 Meridian Circle, Ottawa

	Name	R. A. 1925			Dec. 1925			Obs. C.W.	Obs. C.E.	Boss-Ottawa
		h	m	s	°	′	″			s
43	H Cephei	0	58	11·056	85	51	20·3	101	89	·204
α	Ursae Minoris	1	34	13·533	88	54	11·1	39	34	·167
	Gr 642	3	42	25·197	86	24	46·3	34	46	·113
	Gr 750	4	12	24·132	85	21	23·1	68	69	·048
	Gr 944	5	37	43·235	85	9	46·7	80	93	·075
51	H Cephei	7	05	56·834	87	10	9·8	85	77	·156
25	H Camel	7	15	23·806	82	33	38·7	31	48	·104
	Gr 1119	8	23	37·326	88	51	27·9	76	53	·084
1	H Draconis	9	26	31·653	81	39	35.8	92	57	·167
29	H Camel	10	18	59·919	84	38	4·5	69	50	·211
30	H Camel	10	22	5·060	82	56	28·6	54	28	·050
	Br 1672	12	14	31·745	88	6	56·1	58	55	−·015
32²	H Camel	12	48	33·940	83	49	13·9	89	80	·080
	Gr 2283	15	01	7·489	87	31	18·1	72	72	·391
ε	Ursae Minoris	16	53	35·582	82	09	47·5	65	90	·018
δ	Ursae Minoris	17	56	25·156	86	36	50·5	77	81	·314
λ	Ursae Minoris	18	52	56·375	89	01	42·3	11	14	−·385
76	Draconis	20	48	6·964	82	15	17·7	132	104	·116
	Gr 3548	21	14	36·633	86	43	45·3	65	46	·438
32	H Cephei	22	19	30·334	85	43	53·3	20	21	·206
39	H Cephei	23	27	43·366	86	53	37·9	97	77	·234

The right ascensions of these stars for each night's work were computed in the same manner as those of the clock stars. No result was set down here unless at least two azimuth stars at upper culmination and two at lower culmination, or at least one at upper culmination and one at lower culmination combined with readings on the azimuth marks, were observed. Results were examined for a difference between upper and lower culmination observations. These were examined in each clamp and gave a weighted mean value of $^{s}\cdot 002$. From this result it was considered correct to combine upper and lower observations. Next the results were examined for a clamp difference. This gave a value

$$\text{Cl. W}-\text{Cl. E} = {}^{s}\cdot 003.$$

Clock corrections and clock rates were determined from the meridian circle observations. No result was kept unless at least four clock stars and one azimuth star were observed. The clock rates were obtained by striking a rate from each observer's results provided these were less than ten days apart. These were weighted according to the length of interval between observations and, over whatever length of time the behaviour of the primary clock warranted, either a mean rate was taken, or a determination by least squares was made.

Programme stars were observed along with the clock stars and polars. No results were retained unless at least four clock stars and one polar were observed during the observations. The apparent places of the stars were computed for each night and corrections to reduce these to mean place applied. The positions were then tabulated and differences of the order of $^{s}\cdot 1$ Sec δ were again checked. The positions were then reduced to a mean epoch. Two observations were attempted in each clamp and for standard stars as many observations as possible, in order to have a differential correction to apply to the stars whose positions were not well determined.

A reversing prism was used with the eye piece throughout the observations. The standard stars were used to investigate any difference with regard to clamps, and these were so small that no clamp correction was used and final values are the mean of all observations. Tables V and VI give a summary of these values.

TABLE V

Star		Δ α (Upper-Lower)				Δ α (Clamp W-Clamp E)			
		Δ α (U-L)	Number of obs.		Wt.	Δ α (C_w-C_e)	Number of obs.		Wt.
			U.	L.			W.	E.	
		s				s			
43	H. Cephei	−·107	84	106	47	−·049	101	89	47
α	Ursae Minoris	+·486	25	47	16	+·255	38	34	18
	Gr. 642	+·127	21	59	15	+·034	34	46	19
	Gr. 750	+·065	39	99	28	−·016	61	77	34
	Gr. 944	+·049	46	127	34	+·002	80	93	43
51	H. Cephei	−·140	43	112	31	+·096	78	77	39
25	H. Camel	+·041	21	58	15	+·038	31	48	19
	Gr. 1119	+·175	42	85	28	+·139	79	53	31
1	H. Draconis	−.021	55	94	35	+·048	92	57	35
29	H. Camel	+·093	53	66	29	−·064	69	50	29
30	H. Camel	−·084	40	38	19	−·041	54	24	17
	Br. 1672	+·003	68	47	28	−·075	59	46	26
32²	H. Camel	+·012	91	78	42	−·027	96	73	41
	Gr. 2283	−·186	107	37	27	+·171	72	72	36
ε	Ursae Minoris	+·027	118	37	28	+·020	65	90	38
δ	Ursae Minoris	−·070	126	32	26	−·035	77	81	39
λ	Ursae Minoris	−·459	12	13	6	−·503	11	14	6
76	Draconis	−·010	150	86	56	−·041	132	104	58
	Gr. 3548	+·020	64	41	25	−·077	65	40	26
32	H. Cephei	+·083	28	13	9	+·030	20	21	10
39	H. Cephei	−·012	98	69	40	−·094	92	75	41

Weighted mean U − L = ˢ·002

Weighted mean $C_W - C_E$ = ˢ·003

The observations of the pole stars were combined without applying any corrections for clamp difference or for an observation at upper or lower culmination.

TABLE VI

Δ α (Clamp W. − Clamp E.)

Zone	Δ α (Cl. W. − Cl. E.)	Number of Stars	Zone	Δ α (Cl. W. − Cl. E.)	Number of Stars
° °	s		° °	s	
−20 to −15	−·015	5	20 to 30	−·001	53
−15 to −10	−·009	15	30 to 40	+·007	38
−10 to − 5	·000	30	40 to 50	+·013	46
− 5 to 0	·000	20	50 to 60	+·001	40
0 to + 5	+·005	21	60 to 70	+·010	31
+ 5 to +10	·000	30	70 to 80 U.	+·007	38
10 to 15	+·009	22	70 to 80 L.	+·022	37
15 to 20	+·003	24			

The number of observations in each zone was some hundreds and it was decided not to apply any correction for clamp difference in right ascension.

DECLINATIONS

The declinations were derived from the nadir readings taken at intervals of one and a half hours, and an assumed value for the mean latitude of the meridian circle—45° 23′ 39″·00.

Pulkowa refractions were used. Barometric readings were taken before and after each night's work, while temperature was read for each star. The thermometer was mounted just above the circle microscopes. Determinations for horizontal flexure by means of the north and south collimators were made periodically and gave a mean value of (−″·19 Sin zen. dist.). The individual determinations varied a great deal among themselves, giving both positive and negative values, and for this reason no corrections for flexure were applied. Each observation was corrected for inclination of the declination wires. Usually four pointings were made on the star with the zenith distance micrometer and these were reduced to the meridian by the following formula:—

Reduction to meridian

$$= -\tfrac{1}{2}\, c^2 \operatorname{Sin} 1'' \tan \delta - n.c. \operatorname{Sin} 1'' \operatorname{Sec} \delta - \tfrac{1}{2}\, n^2 \operatorname{Sin} 1'' \tan \delta$$

where c is equatorial interval in seconds of arc between line of collimation and the thread at which the bisection was made, and n the polar deviation of the instrument.

Only two circle microscopes were used and correction for run was applied. In the case of the nadir each microscope was read before and after the declination micrometer readings for the coincidence of the wires and their reflected images. The usual procedure was to set the circle so that the same part of the circle microscope screw was used during a night, and no correction for screw error of the circle microscopes was applied.

The division errors of both Circle A and Circle B were measured during 1920 and the following tables give the errors as applied:—

TABLE VII

CIRCLE A. CORRECTIONS FOR GRADUATION ERRORS. TWO MICROSCOPES

Pointer											Pointer
°	″	°	°	″	°	°	″	°	°	″	°
0	0·53	180	50	−0·14	230	90	0·52	270	130	−0·45	310
1	·58	181	51	− ·21	231	91	·47	271	131	− ·49	311
2	·59	182	52	− ·28	232	92	·43	272	132	− ·58	312
3	·52	183	53	− ·30	233	93	·44	273	133	− ·66	313
4	·50	184	54	− ·32	234	94	·47	274	134	− ·69	314
5	·45	185	55	− ·29	235	95	·50	275	135	− ·66	315
6	·44	186	56	− ·22	236	96	·54	276	136	− ·66	316
7	·41	187	57	− ·14	237	97	·59	277	137	− ·68	317
8	·38	188	58	− ·10	238	98	·65	278	138	− ·72	318
9	·32	189	59	− ·08	239	99	·72	279	139	− ·76	319
10	·26	190	60	− ·12	240	100	·75	280	140	− ·76	320
11	·19	191	61	− ·18	241	101	·78	281	141	− ·72	321
12	·12	192	62	− ·30	242	102	·78	282	142	− ·66	322
13	·02	193	63	− ·40	243	103	·85	283	143	− ·63	323
14	− ·03	194	64	− ·49	244	104	·90	284	144	− ·61	324
15	− ·04	195	65	− ·58	245	105	·96	285	145	− ·56	325
16	− ·03	196	66	− ·68	246	106	·96	286	146	− ·43	326
17	·02	197	67	− ·77	247	107	·95	287	147	− ·30	327
18	·06	198	68	− ·78	248	108	·90	288	148	− ·18	328
19	·10	199	69	− ·77	249	109	·86	289	149	− ·11	329
20	·11	200	70	− ·73	250	110	·78	290	150	− ·06	330
21	·10	201	71	− ·72	251	111	·72	291	151	− ·04	331
22	·09	202	72	− ·68	252	112	·64	292	152	− ·01	332
23	·07	203	73	− ·62	253	113	·62	293	153	·05	333
24	·06	204	74	− ·52	254	114	·56	294	154	·10	334
25	·05	205	75	− ·43	255	115	·52	295	155	·14	335
26	·03	206	76	− ·38	256	116	·39	296	156	·18	336
27	·02	207	77	− ·37	257	117	·28	297	157	·24	337
28	·03	208	78	− ·40	258	118	·15	298	158	·31	338
29	·06	209	79	− ·44	259	119	·07	299	159	·37	339
30	·06	210	80	− ·46	260	120	− ·00	300	160	·41	340
31	·00	211	81	− ·46	261	121	− ·07	301	161	·38	341
32	− ·03	212	82	− ·44	262	122	− ·15	302	162	·34	342
33	− ·04	213	83	− ·42	263	123	− ·23	303	163	·31	343
34	− ·02	214	84	− ·38	264	124	− ·29	304	164	·32	344
35	− ·03	215	85	− ·32	265	125	− ·33	305	165	·30	345
36	− ·04	216	86	− ·24	266	126	− ·35	306	166	·21	346
37	− ·07	217	*87	− ·14	267	127	− ·40	307	167	·08	347
38	− ·08	218	88	·56	268	128	− ·43	308	168	− ·04	348
39	− ·12	219	89	·56	269	129	− ·46	309	169	− ·08	349
40	− ·17	220							170	− ·14	350
41	− ·22	221							171	− ·12	351
42	− ·22	222							172	− ·12	352
43	− ·22	223							173	·00	353
44	− ·17	224							174	·13	354
45	− ·12	225							175	·29	355
46	− ·05	226							176	·36	356
47	− ·01	227							177	·39	357
48	− ·00	228							178	·39	358
49	− ·04	229							179	·44	359

°	′	″	°	′
*87	15	−0·00	267	15
87	30	·01	267	30
87	45	− ·10	267	45
87	50	− ·18	267	50
87	55	− ·28	267	55

TABLE VIII

CIRCLE B. CORRECTIONS FOR GRADUATION ERRORS. TWO MICROSCOPES

Pointer °	″	°	°	″	°	°	″	°	°	″	Pointer °
0	0·49	180	45	−0·13	225	90	−0·29	270	135	0·65	315
1	·52	181	46	− ·09	226	*91	− ·26	271	136	·63	316
2	·58	182	47	− ·05	227	92	—	272	137	·64	317
3	·63	183	48	− ·01	228	93	—	273	138	·68	318
4	·63	184	49	− ·02	229	94	—	274	139	·76	319
5	·64	185	50	·01	230	95	—	275	140	·81	320
6	·67	186	51	·00	231	96	—	276	141	·85	321
7	·72	187	52	·01	232	97	− ·10	277	142	·83	322
8	·72	188	53	·05	233	98	− ·12	278	143	·80	323
9	·70	189	54	·06	234	99	− ·12	279	144	·75	324
10	·68	190	55	·04	235	100	− ·15	280	145	·70	325
11	·67	191	56	− ·03	236	101	− ·22	281	146	·64	326
12	·63	192	57	− ·12	237	102	− ·30	282	147	·56	327
13	·63	193	58	− ·18	238	103	− ·37	283	148	·43	328
14	·71	194	59	− ·22	239	104	− ·40	284	149	·30	329
15	·84	195	60	− ·22	240	105	− ·40	285	150	·16	330
16	·96	196	61	− ·20	241	106	− ·39	286	151	·08	331
17	1·01	197	62	− ·15	242	107	− ·36	287	152	− ·01	332
18	1·04	198	63	− ·11	243	108	− ·34	288	153	− ·11	333
19	1·03	199	64	− ·09	244	109	− ·34	289	154	− ·25	334
20	1·02	200	65	− ·10	245	110	− ·41	290	155	− ·39	335
21	1·02	201	66	− ·08	246	111	− ·49	291	156	− ·51	336
22	1·00	202	67	− ·06	247	112	− ·50	292	157	− ·57	337
23	·97	203	68	·01	248	113	− ·42	293	158	− ·57	338
24	·92	204	69	·07	249	114	− ·26	294	159	− ·56	339
25	·86	205	70	·12	250	115	− ·12	295	160	− ·56	340
26	·75	206	71	·13	251	116	− ·02	296	161	− ·56	341
27	·58	207	72	·15	252	117	·03	297	162	− ·57	342
28	·40	208	73	·12	253	118	·06	298	163	− ·59	343
29	·28	209	74	·10	254	119	·10	299	164	− ·63	344
30	·25	210	75	·03	255	120	·17	300	165	− ·62	345
31	·30	211	76	− ·01	256	121	·24	301	166	− ·57	346
32	·35	212	77	− ·08	257	122	·29	302	167	− ·48	347
33	·37	213	78	− ·12	258	123	·35	303	168	− ·39	348
34	·32	214	79	− ·16	259	124	·42	304	169	− ·31	349
35	·25	215	80	− ·21	260	125	·48	305	170	− ·24	350
36	·19	216	81	− ·24	261	126	·53	306	171	− ·16	351
37	·20	217	82	− ·27	262	127	·58	307	172	− ·11	352
38	·26	218	83	− ·27	263	128	·64	308	173	− ·05	353
39	·28	219	84	− ·26	264	129	·64	309	174	·00	354
40	·21	220	85	− ·26	265	130	·61	310	175	·09	355
41	·10	221	86	− ·28	266	131	·54	311	176	·22	356
42	− ·01	222	87	− ·31	267	132	·55	312	177	·37	357
43	− ·07	223	88	− ·32	268	133	·60	313	178	·49	358
44	− ·11	224	89	− ·31	269	134	·64	314	179	·51	359

°	′	″	°	′	°	′	″	°	′
*91	00	−0·26	271	00	93	55	−8·27	273	55
91	55	− ·25	271	55	94	25	−8·36	274	25
92	00	·16	272	00	94	55	−7·92	274	55
92	05	− ·15	272	05	95	00	− ·46	275	00
92	10	− ·76	272	10	95	05	− ·48	275	05
92	15	−8·36	272	15	95	10	− ·60	275	10
92	20	−8·21	272	20	95	25	− ·59	275	25
92	25	−8·18	272	25	95	55	− ·56	275	55
92	55	−8·49	272	55	96	25	− ·38	276	25
93	25	−8·35	273	25	96	55	− ·10	276	55

TABLE IX

CORRECTIONS FOR GRADUATION ERRORS. CIRCLE A. CLAMP E. FOUR MICROSCOPES

Pointer									Pointer
°	°	″	°	°	°	°	″	°	°
0	90	0·52	180	270	45	135	−0·39	225	315
1	91	·52	181	271	46	136	− ·35	226	316
2	92	·51	182	272	47	137	− ·34	227	317
3	93	·48	183	273	48	138	− ·36	228	318
4	94	·48	184	274	49	139	− ·40	229	319
5	95	·48	185	275	50	140	− ·45	230	320
6	96	·49	186	276	51	141	− ·47	231	321
7	97	·50	187	277	52	142	− ·47	232	322
8	98	·51	188	278	53	143	− ·46	233	323
9	99	·52	189	279	54	144	− ·47	234	324
10	100	·51	190	280	55	145	− ·43	235	325
11	101	·48	191	281	56	146	− ·33	236	326
12	102	·45	192	282	57	147	− ·22	237	327
13	103	·44	193	283	58	148	− ·14	238	328
14	104	·44	194	284	59	149	− ·10	239	329
15	105	·46	195	285	60	150	− ·09	240	330
16	106	·46	196	286	61	151	− ·11	241	331
17	107	·48	197	287	62	152	− ·15	242	332
18	108	·48	198	288	63	153	− ·18	243	333
19	109	·48	199	289	64	154	− ·20	244	334
20	110	·44	200	290	65	155	− ·22	245	335
21	111	·41	201	291	66	156	− ·25	246	336
22	112	·36	202	292	67	157	− ·26	247	337
23	113	·34	203	293	68	158	− ·24	248	338
24	114	·31	204	294	69	159	− ·20	249	339
25	115	·29	205	295	70	160	− ·16	250	340
26	116	·21	206	296	71	161	− ·17	251	341
27	117	·15	207	297	72	162	− ·17	252	342
28	118	·09	208	298	73	163	− ·15	253	343
29	119	·06	209	299	74	164	− ·10	254	344
30	120	·02	210	300	75	165	− ·07	255	345
31	121	− ·03	211	301	76	166	− ·09	256	346
32	122	− ·09	212	302	77	167	− ·14	257	347
33	123	− ·13	213	303	78	168	− ·22	258	348
34	124	− ·16	214	304	79	169	− ·26	259	349
35	125	− ·18	215	305	80	170	− ·30	260	350
36	126	− ·20	216	306	81	171	− ·29	261	351
37	127	− ·23	217	307	82	172	− ·28	262	352
38	128	− ·26	218	308	83	173	− ·21	263	353
39	129	− ·29	219	309	84	174	− ·13	264	354
40	130	− ·31	220	310	85	175	− ·02	265	355
41	131	− ·36	221	311	86	176	·06	266	356
42	132	− ·40	222	312	*87	177	·12	267	357
43	133	− ·44	223	313	88	178	·48	268	358
44	134	− ·43	224	314	89	179	·50	269	359

°	′	°	′	″	°	′	°	′
*87	00	177	00	0·12	267	00	357	00
87	15	177	15	·19	267	15	357	15
87	30	177	30	·20	267	30	357	30
87	45	177	45	·15	267	45	357	45
87	50	177	50	·11	267	50	357	50
87	55	177	55	·06	267	55	357	55
88	00	178	00	·48	268	00	358	00

TABLE X

CORRECTIONS FOR GRADUATION ERRORS. CIRCLE B. CLAMP W. FOUR MICROSCOPES

Pointer									Pointer
°	°	″	°	°	°	°	″	°	°
0	90	0·10	180	270	45	135	0·26	225	315
*1	91	·13	181	271	46	136	·27	226	316
2	92	—	182	272	47	137	·30	227	317
3	93	—	183	273	48	138	·35	228	318
4	94	—	184	274	49	139	·39	229	319
5	95	—	185	275	50	140	·41	230	320
6	96	—	186	276	51	141	·42	231	321
7	97	·31	187	277	52	142	·42	232	322
8	98	·30	188	278	53	143	·42	233	323
9	99	·29	189	279	54	144	·41	234	324
10	100	·26	190	280	55	145	·37	235	325
11	101	·22	191	281	56	146	·30	236	326
12	102	·17	192	282	57	147	·22	237	327
13	103	·13	193	283	58	148	·13	238	328
14	104	·16	194	284	59	149	·04	239	329
15	105	·22	195	285	60	150	− ·03	240	330
16	106	·29	196	286	61	151	− ·06	241	331
17	107	·33	197	287	62	152	− ·08	242	332
18	108	·35	198	288	63	153	− ·11	243	333
19	109	·34	199	289	64	154	− ·17	244	334
20	110	·30	200	290	65	155	− ·24	245	335
21	111	·27	201	291	66	156	− ·29	246	336
22	112	·25	202	292	67	157	− ·31	247	337
23	113	·28	203	293	68	158	− ·28	248	338
24	114	·33	204	294	69	159	− ·24	249	339
25	115	·37	205	295	70	160	− ·22	250	340
26	116	·36	206	296	71	161	− ·22	251	341
27	117	·31	207	297	72	162	− ·21	252	342
28	118	·23	208	298	73	163	− ·24	253	343
29	119	·19	209	299	74	164	− ·26	254	344
30	120	·21	210	300	75	165	− ·28	255	345
31	121	·27	211	301	76	166	− ·29	256	346
32	122	·32	212	302	77	167	− ·28	257	347
33	123	·36	213	303	78	168	− ·26	258	348
34	124	·37	214	304	79	169	− ·24	259	349
35	125	·36	215	305	80	170	− ·22	260	350
36	126	·36	216	306	81	171	− ·20	261	351
37	127	·39	217	307	82	172	− ·19	262	352
38	128	·45	218	308	83	173	− ·16	263	353
39	129	·46	219	309	84	174	− ·13	264	354
40	130	·41	220	310	85	175	− ·08	265	355
41	131	·32	221	311	86	176	− ·03	266	356
42	132	·27	222	312	87	177	·03	267	357
43	133	·27	223	313	88	178	·08	268	358
44	134	·27	224	314	89	179	·10	269	359

°	′	°	′	″	°	′	°	′	°	′	°	′	″	°	′	°	′
*1	55	91	55	0·17	181	55	271	55	4	25	94	25	−3·86	184	25	274	25
2	00	92	00	·37	182	00	272	00		30		30	−3·83		30		30
	05		05	·22		05		05		55		55	−3·64		55		55
	10		10	− ·08		10		10	5	00	95	00	·09	185	00	275	00
	15		15	−3·88		15		15		05		05	·08		05		05
	20		20	−3·80		20		20		10		10	·02		10		10
	25		25	−3·79		25		25		30		30	·03		30		30
	55		55	−3·93		55		55		55		55	·00		55		55
3	25	93	25	−3·86	183	25	273	25	6	30	96	30	·18	186	30	276	30
3	55	93	55	−3·82	183	55	273	55	6	55	96	55	·31	186	55	276	55

Declination Micrometer Screw Value

By using the north azimuth mark, the north collimator and the nadir as reference points, and shifting the telescope through an arc of 10 minutes, the value of 12·4 revolutions of the screw was measured by the circle microscopes in each clamp. The effect of the progressive error of the screw ($+ \cdot 000192\ t^2 - \cdot 0000224\ t^3$) was applied to the micrometer readings. The difference in division error between the two divisions 10 minutes apart is negligible. The following results were obtained:—

—	Cl. E.	Wt.	Cl. W.	Wt.
North mark	48″·404	20	48″·401	10
North coll.	58·396	20	48·382	10
Nadir	48·414	20	48·404	10

The mean of the six sets was adopted as the value of the screw, viz. 48″·400. In the computations the value 48″·300 was used. The difference between this and the value 48″·400 was included in the correction applied as screw error. (See Table XII.)

n = indicated number of revolutions

$f(n)$ = correction for progressive error at readings (n)

Δ = correction to assumed value 48″·3

$R = 48''\cdot 3 + \Delta$

Value in arc $= (n + f(n))\ [48''\cdot 3 + \Delta]$

Screw error as applied $= Rf(n) + n\Delta$

TABLE XI—PROGRESSIVE ERROR OF DECLINATION MICROMETER SCREW

$\Delta n = (+ \cdot 000192\ t^2 - \cdot 0000224\ t^3)$, where $t = (n^R - 25^R)$

Unit = ·00001ᴿ

Rev.	0	1	2	3	4	5	6
0·0	0	17	59	112	164	200	207
·1	0	20	64	118	168	202	206
·2	1	24	69	123	173	204	204
·3	2	28	74	129	177	206	202
·4	3	32	80	134	181	207	199
·5	5	36	85	139	185	208	196
·6	6	40	90	144	188	209	192
·7	9	45	96	149	192	209	188
·8	11	49	101	154	195	209	184
·9	14	54	107	159	198	208	178
Rev.	**−0**	**−1**	**−2**	**−3**	**−4**	**−5**	**−6**
0·0	0	21	95	233	451	760	1175
·1	0	26	105	251	477	797	1223
·2	1	32	117	270	505	834	1272
·3	2	37	129	290	533	873	1322
·4	3	44	142	310	563	913	1374
·5	5	51	155	331	593	954	1426
·6	7	58	169	353	624	996	1480
·7	10	67	184	376	657	1039	1536
·8	13	75	200	400	690	1083	1592
·9	17	85	216	425	725	1128	1650

TABLE XII—DECLINATION MICROMETER CORRECTIONS

Rev.	18	19	20	21	22	23	24	
0·0	2″627	2″469	2″368	2″318	2″313	2″346	2″410	0·0
·1	·609	·456	·361	·316	·315	·351	·418	·1
·2	·591	·444	·354	·314	·317	·356	·426	·2
·3	·573	·433	·348	·312	·319	·362	·435	·3
·4	·556	·422	·342	·311	·322	·368	·443	·4
·5	·540	·412	·337	·310	·325	·375	·452	·5
·6	·525	·402	·332	·310	·329	·381	·461	·6
·7	·510	·393	·328	·310	·332	·388	·471	·7
·8	·496	·384	·324	·311	·337	·395	·481	·8
·9	·482	·376	·321	·312	·341	·403	·490	·9
1·0	·469	·368	·318	·313	·346	·410	·500	1·0
Rev.	**25**	**26**	**27**	**28**	**29**	**30**	**31**	
0·0	2″500	2″608	2″729	2″854	2″979	3″097	3″200	0·0
·1	·510	·620	·741	·867	·991	·108	·210	·1
·2	·521	·632	·753	·879	3·004	·119	·219	·2
·3	·531	·644	·766	·892	·017	·130	·228	·3
·4	·541	·656	·779	·905	·028	·140	·236	·4
·5	·552	·667	·791	·917	·040	·151	·245	·5
·6	·563	·679	·804	·930	·051	·161	·253	·6
·7	·574	·692	·816	·942	·063	·171	·261	·7
·8	·585	·704	·829	·955	·074	·181	·269	·8
·9	·597	·716	·842	·967	·086	·191	·276	·9
1·0	·608	·729	·854	·979	·097	·200	·284	1·0

Corrections for the variation of latitude were computed from the values given by International Latitude Variation Stations. These corrections, applicable to the declinations, are given in the following table.

TABLE XIII—VARIATION OF LATITUDE

	0·0	0·1	0·2	0·3	0·4	0·5	0·6	0·7	0·8	0·9	
1911	−0″30	−0″30	−0″21	−0″05	0″12	0″25	0″31	0″29	0″18	0″06	1911
1912	− ·08	− ·18	− ·22	− ·20	− ·13	− ·03	·06	·10	·13	·13	1912
1913	·10	·06	·01	− ·06	− ·11	− ·13	− ·14	− ·13	− ·10	− ·04	1913
1914	·03	·09	·13	·13	·07	− ·01	− ·11	− ·20	− ·25	− ·21	1914
1915	− ·12	·04	·18	·26	·28	·19	·08	− ·06	− ·22	− ·28	1915
1916	−0″24	−0″17	0″02	0″13	0″22	0″22	0″15	0″01	−0″14	−0″23	1916
1917	− ·26	− ·21	− ·13	− ·01	·10	·13	·11	·06	− ·01	− ·09	1917
1918	− ·16	− ·14	− ·07	− ·02	·06	·11	·12	·09	·05	·05	1918
1919	·07	·06	·03	− ·02	− ·04	− ·06	− ·07	− ·06	− ·04	·02	1919
1920	·09	·13	·14	·12	·06	− ·01	− ·08	− ·13	− ·17	− ·17	1920
1921	−0″12	−0″03	0″03	0″07	0″10	0″06	0″01	−0″09	−0″15	−0″13	1921
1922	− ·10	− ·05	·04	·12	·15	·14	·08	·01	− ·08	− ·13	1922
1923	− ·14	− ·10	− ·02	·10	·18	·21	·22	·18	·10	·01	1923
1924	− ·05	− ·08									

Lower culmination observations use opposite sign.

A comparison was made between the results Cl. East and Cl. West, using chiefly clock stars, standard stars and azimuth stars. These results are given in the following tables. The subscript numbers indicate the weight computed from the formula $\frac{m\,n}{m+n}$ where m and n are the number of observations in each clamp.

TABLE XIV

COMPARISONS OF DECLINATIONS CLAMP EAST AND CLAMP WEST

CLOCK STARS

$\Delta\,\delta$ (E-W)

R.A. Zone	h h 0 to 4	h h 4 to 8	h h 8 to 12	h h 12 to 16	h h 16 to 20	h h 20 to 0	Mean
°	″	″	″	″	″	″	″
−15	$-0\cdot22_{5}$	$-0\cdot29_{4}$	$+0\cdot34_{3}$	$+0\cdot10_{21}$	$+0\cdot04_{17}$	$+0\cdot46_{13}$	$+0\cdot13_{63}$
−10	$+\cdot06_{29}$	$+\cdot31_{11}$	$+\cdot14_{13}$	$-\cdot37_{30}$	$-\cdot24_{33}$	$-\cdot19_{58}$	$-\cdot13_{169}$
− 5	$+\cdot12_{6}$	$+\cdot07_{31}$	$-\cdot09_{7}$	$-\cdot16_{31}$	$+\cdot13_{34}$	$-\cdot09_{16}$	$+\cdot00_{125}$
0	$-\cdot03_{9}$	$+\cdot10_{21}$	$+\cdot12_{17}$	$-\cdot14_{38}$	—	$+\cdot35_{42}$	$+\cdot11_{127}$
5	$-\cdot13_{25}$	$-\cdot05_{22}$	$+\cdot05_{40}$	$-\cdot47_{21}$	$-\cdot11_{70}$	$+\cdot06_{55}$	$-\cdot07_{233}$
10	$-\cdot16_{49}$	$-\cdot10_{12}$	$-\cdot03_{90}$	$-\cdot21_{13}$	$-\cdot09_{37}$	$-\cdot28_{26}$	$-\cdot11_{227}$
15	$-\cdot44_{23}$	$-\cdot08_{43}$	$\cdot00_{36}$	$-\cdot25_{23}$	$+\cdot09_{18}$	$-\cdot03_{22}$	$-\cdot11_{165}$
20	$-\cdot18_{12}$	$+\cdot07_{10}$	$-\cdot26_{12}$	$+\cdot24_{21}$	$-\cdot09_{25}$	$-\cdot18_{12}$	$-\cdot04_{93}$
Mean.....	$-\cdot14_{158}$	$+\cdot01_{184}$	$+\cdot01_{218}$	$-\cdot15_{198}$	$-\cdot06_{234}$	$+\cdot01_{240}$	$-\cdot05_{1202}$

TABLE XV

STANDARD STARS < 70°

$\Delta\,\delta$ (E-W)

R.A. Zone	h h 0 to 6	h h 6 to 12	h h 12 to 18	h h 18 to 24	Mean
° °	″	″	″	″	″
0 — 20	—	$1\cdot51_{3}$	$0\cdot33_{6}$	—	$0\cdot73_{9}$
20 — 30	$-0\cdot18_{37}$	$-\cdot21_{52}$	$-\cdot16_{30}$	$-0\cdot22_{48}$	$-\cdot19_{165}$
30 — 40	$-\cdot33_{30}$	$-\cdot49_{44}$	$-\cdot56_{35}$	$-\cdot63_{22}$	$-\cdot50_{131}$
40 — 50	$-\cdot51_{42}$	$-\cdot03_{42}$	$-\cdot21_{27}$	$-\cdot40_{28}$	$-\cdot29_{149}$
50 — 60	$-\cdot36_{30}$	$-\cdot34_{26}$	$-\cdot37_{36}$	$-\cdot49_{26}$	$-\cdot39_{118}$
60 — 70	$-\cdot10_{20}$	$\cdot13_{22}$	$-\cdot20_{32}$	$-\cdot05_{22}$	$-\cdot07_{96}$
Mean.....	$-0\cdot34_{159}$	$-0\cdot17_{189}$	$-0\cdot28_{164}$	$-0\cdot36_{155}$	$-0\cdot28_{669}$

TABLE XVI

STANDARD STARS > 70°

Mean Dec.	Δ δ (E-W)
°	″
70	$-0\cdot18_{12}$
71	$+\cdot03_{9}$
72	$-\cdot41_{18}$
73	$-\cdot97_{5}$
74	$-\cdot54_{13}$
75	$-\cdot40_{10}$
76	$-\cdot76_{8}$
77	$-\cdot06_{15}$
78	$-\cdot92_{5}$
79	$+\cdot09_{8}$
80	$-\cdot36_{2}$
100	$-\cdot68_{3}$
101	$+\cdot76_{9}$
102	$-\cdot38_{4}$
103	$-\cdot03_{15}$
104	$-\cdot10_{8}$
105	$-\cdot17_{8}$
106	$+\cdot34_{12}$
107	$+1\cdot08_{2}$
108	$-\cdot12_{17}$
109	$-\cdot12_{11}$
110	$-\cdot32_{10}$

Weighted mean $-0''.17_{202}$

TABLE XVII

AZIMUTH STARS

Mean Dec.	Δ δ (E-W)
°	″
82	$-0\cdot52_{45}$
83	$-\cdot22_{12}$
84	$-\cdot39_{13}$
85	$-\cdot67_{33}$
86	$-\cdot54_{30}$
87	$-\cdot16_{43}$
88	$-\cdot39_{27}$
89	$+\cdot18_{13}$
91	$+\cdot27_{17}$
92	$-\cdot18_{18}$
93	$+\cdot29_{35}$
94	$+\cdot19_{29}$
95	$+\cdot59_{42}$
96	$+\cdot78_{10}$
97	$+\cdot26_{12}$
98	$+\cdot38_{38}$

Weighted mean $-''.30_{402}$

A similar comparison of other stars between 0° and 70° gave a value Δ δ (E-W) = $-''\cdot22$. This value was not used, however, in determining the final Δ δ (E-W), since the δ's were reduced to 1925 without proper motion. However, since the epoch in each clamp is nearly the same, it does give some information.

TABLE XVIII—SUMMARY Δ δ (E-W)

—	Δ δ (E-W)
Azimuth Stars > 70	$-0''.30_{402}$
Clock Stars	$-\cdot05_{1202}$
Standard Stars < 70	$-\cdot28_{669}$
Standard Stars > 70	$-\cdot17_{202}$

Value adopted Δ δ (E-W) = $-''.20$

$\delta = \delta_E + ''.10 : \delta = \delta_W - ''.10$

In forming the final catalogue places, the mean was taken when number of observations in each clamp was equal. The number of observations in each clamp being unequal, the above corrections were applied and the mean taken. Each observation then enters with full weight.

TABLE XIX—DIFFERENCES IN DECLINATIONS ABOVE AND BELOW POLE

Name of Star	Approx. Dec.		Seconds of Dec.		Δ δ	Weight
			Above	Below		
	°	′			″	
ε Draconis	70	4	37·84	37·18	0·66	6
α Ursae Maj	70	9	40·74	39·85	·89	6
χ Draconis	70	12	5·44	4·88	·56	5
β Cephei	70	13	53·27	52·65	·62	5
5 H Camel	71	6	11·86	11·38	·48	5
ν Draconis	71	11	50·75	50·18	·57	5
φ Draconis	71	17	54·38	53·75	·63	5
24 Cephei	71	58	18·29	18·20	·09	5
50 Cassiopeiae	72	3	34.61	33.32	1.29	5
γ Ursae Minoris	72	6	3.66	2.95	·71	5
ψ Draconis	72	11	10·37	9·96	·41	6
36 H Cassiopeiae	72	29	30·49	29·82	·67	5
40 Cassiopeiae	72	39	31·38	30·50	·88	5
χ Draconis	72	42	3·00	2·35	·65	4
Gr. 2001	72	46	50·61	50·08	·53	5
τ Draconis	73	13	61·51	60·48	1·03	5
β Ursae Minoris	74	27	44·08	42·97	1·11	5
21 Cassiopeiae	74	34	42·66	42·40	·26	5
73 Draconis	74	41	52·74	51·98	·76	5
π Cephei	74	58	54·99	54·67	·32	6
Gr. 966	74	59	50·85	50·00	·85	6
Gr. 848	75	48	27·78	27·07	·71	7
η Ursae Minoris	75	55	43·99	43·32	·67	6
Br. 1147	75	59	18·21	17·42	·79	6
5 Ursae Minoris	76	1	45·95	45·03	·92	6
19 Ursae Minoris	76	4	1·72	0·44	1·28	4
9 H Draconis	76	5	60·54	59·02	1·52	6
24 H Camel	77	4	34.80	34·02	·78	6
γ Cephei	77	12	50·06	48·73	1·33	6
48 H Cephei	77	27	41·91	40·79	1·12	5
κ Cephei	77	29	10·96	10·16	·80	5
77 Draconis	77	49	21·64	20·58	1·06	5
4 Ursae Minoris	77	53	60·21	59·10	1·11	5
ζ Ursae Minoris	78	1	33·85	33·35	·50	5
4 H Draconis	78	1	58·28	57·44	·84	5
19 H Camel	79	8	55·80	55·01	·79	6
44 H Cephei	79	16	31·54	30·57	·97	6
23 H Camel	79	38	59·03	58·45	·58	5
Br. 2749	80	16	18·91	17·90	1·01	5
1 H Draconis	81	39	36·20	35·36	·84	25
ε Ursae Minoris	82	9	47·74	47·35	·39	23
76 Draconis	82	15	17·83	17·61	·22	37
25 H Camel	82	33	39·10	38·28	·82	15
30 H Camel	82	56	28·81	28·32	·49	10
32² H Camel	83	49	14·28	13·59	·69	25
29 H Camel	84	38	4·57	4·18	·39	20
Gr. 944	85	9	47·04	46·39	·65	33
Gr. 750	85	21	23·52	22·90	·62	27
43 H Cephei	85	51	20·63	20·01	·62	35
Gr. 642	86	24	46·80	45·85	·95	15
δ Ursae Minoris	86	36	50·74	50·20	·54	23
39 H Cephei	86	53	38·31	37·46	·85	30
51 H Cephei	87	10	10·13	9·48	·65	30
Gr. 2283	87	31	18·53	17·95	·58	17
Br. 1672	88	06	56·35	55·80	·55	20
Gr. 1119	88	51	28·24	27·77	·47	20
α Ursae Minoris	88	54	11·44	10·74	·70	13

To determine a correction to the adopted mean latitude, the stars near the pole that were observed at both upper and lower culmination, were compared. Weights were computed by means of the formula

$$\frac{m\,n}{m+n}$$

where m and n denote the number of observations made at upper and lower culmination.

Table XIX is a list of stars observed above and below the pole. These are arranged in order of declination and the following table summarizes the results.

TABLE XX—$\Delta\,\delta$ (Above-Below)

Approx. Dec.	$\Delta\,\delta$	Weight
°	″	
70	0·69	22
71	·44	20
72	·73	35
73	1·03	5
74	·65	27
75	·72	19
76	1·23	16
77	1·03	32
78	·67	10
79	·79	17
80	1·01	5
Weighted mean $\Delta\,\delta = 0''.787_{208}$		
°	″	
81	0·84	25
82	·40	85
83	·69	25
84	·39	20
85	·63	95
86	·77	68
87	·62	47
88	·56	53
Weighted mean $\Delta\,\delta = 0''.601_{418}$		

Final adopted correction

$\Delta\,\phi = \frac{1}{2}\,\Delta\,\delta$ (below-above) $= -''.33$ (Weight 626)

Corrected latitude $= 45°\ 23'\ 38''.67$

A night correction was applied to all the stars not brought to 1925 with proper motion. This was a mean nightly error determined from standard, fundamental and azimuth stars by taking differences between a star's position on a night and its mean position from all the determinations in either clamp east or clamp west as the case might be.

The following tables are comparisons of the Ottawa values with Boss' positions from Boss' Preliminary General Catalogue, Eichelberger's positions for 1925 and the First Greenwich Catalogue of Stars for 1925·0.

The subscript numbers indicate the number of stars used in forming the values.

TABLE XXI—Δ α (0 – Boss)

Dec. \ R.A.	h h 0 – 3	h h 3 – 6	h h 6 – 9	h h 9 – 12	h h 12 – 15	h h 15 – 18	h h 18 – 21	h h 21 – 0	Mean
° °	s	s	s	s	s	s	s	s	s
90 – 80	−0·185$_{2}$	−0·079$_{3}$	−0·113$_{3}$	−0·147$_{3}$	−0·032$_{2}$	−0·242$_{3}$	−0·076$_{3}$	−0·288$_{3}$	−0·149$_{22}$
80 – 70	+ ·004$_{5}$	− ·032$_{5}$	+ ·011$_{3}$	− ·052$_{2}$	− ·087$_{6}$	− ·162$_{5}$	− ·057$_{7}$	− ·099$_{5}$	− ·064$_{38}$
70 – 60	− ·060$_{5}$	− ·057$_{2}$	− ·060$_{3}$	− ·024$_{5}$	− ·034$_{4}$	− ·064$_{4}$	− ·041$_{4}$	− ·015$_{5}$	− ·042$_{32}$
60 – 50	− ·029$_{8}$	− ·019$_{3}$	− ·047$_{4}$	− ·023$_{5}$	− ·030$_{5}$	− ·074$_{7}$	− ·024$_{5}$	− ·016$_{4}$	− ·029$_{41}$
50 – 40	− ·014$_{4}$	− ·024$_{10}$	− ·021$_{7}$	− ·012$_{5}$	− ·005$_{5}$	− ·019$_{5}$	− ·038$_{5}$	− ·015$_{7}$	− ·029$_{48}$
40 – 30	− ·024$_{4}$	− ·015$_{6}$	− ·013$_{6}$	− ·009$_{6}$	− ·008$_{4}$	− ·021$_{6}$	·000$_{5}$	− ·004$_{2}$	− ·013$_{39}$
30 – 20	− ·009$_{9}$	− ·006$_{5}$	− ·006$_{13}$	+ ·007$_{4}$	− ·003$_{4}$	− ·009$_{6}$	+ ·014$_{6}$	− ·003$_{9}$	− ·003$_{56}$
20 – 10	− ·007$_{3}$	− ·006$_{7}$	− ·007$_{8}$	− ·008$_{8}$	− ·013$_{5}$	− ·010$_{6}$	+ ·004$_{3}$	− ·004$_{4}$	− ·006$_{49}$
10 – 0	+ ·004$_{11}$	+ ·000$_{5}$	− ·009$_{5}$	+ ·004$_{3}$	− ·005$_{5}$	− ·001$_{7}$	+ ·004$_{5}$	− ·003$_{7}$	− ·000$_{54}$
0 – −10	− ·006$_{5}$	− ·004$_{9}$	− ·005$_{5}$	+ ·005$_{4}$	+ ·007$_{3}$	+ ·037$_{5}$	+ ·000$_{9}$	+ ·010$_{3}$	+ ·006$_{58}$
−10 – −20	+ ·002$_{2}$	− ·018$_{2}$	− ·002$_{2}$	+ ·008$_{2}$	− ·003$_{4}$	·000$_{3}$	+ ·001$_{3}$	− ·008$_{4}$	− ·003$_{22}$

Δ δ (0 – Boss)

° °	″	″	″	″	″	″	″	″	′
90 – 80	+0·07$_{2}$	−0·12$_{3}$	−0·12$_{3}$	−0·20$_{3}$	−0·16$_{3}$	+0·37$_{3}$	−0·09$_{3}$	+0·36$_{3}$	+0·02$_{22}$
80 – 70	+ ·02$_{5}$	− ·04$_{5}$	+ ·17$_{3}$	− ·27$_{2}$	·00$_{6}$	+ ·24$_{5}$	+ ·43$_{7}$	+ ·28$_{5}$	+ ·14$_{38}$
70 – 60	+ ·20$_{5}$	− ·10$_{2}$	− ·13$_{3}$	+ ·19$_{5}$	+ ·23$_{4}$	+ ·36$_{4}$	+ ·46$_{4}$	+ ·10$_{5}$	+ ·19$_{32}$
60 – 50	+ ·39$_{3}$	− ·16$_{3}$	+ ·30$_{4}$	+ ·23$_{5}$	+ ·34$_{5}$	+ ·35$_{7}$	+ ·70$_{5}$	+ ·42$_{4}$	+ ·35$_{41}$
50 – 40	+ ·46$_{4}$	+ ·20$_{10}$	+ ·27$_{7}$	+ ·13$_{5}$	+ ·51$_{5}$	+ ·15$_{5}$	+ ·73$_{5}$	+ ·52$_{7}$	+ ·34$_{48}$
40 – 30	+ ·42$_{4}$	+ ·47$_{6}$	− ·09$_{6}$	+ ·13$_{6}$	+ ·26$_{4}$	+ ·53$_{6}$	+ ·40$_{5}$	+ ·38$_{2}$	+ ·30$_{39}$
30 – 20	+ ·24$_{9}$	+ ·29$_{5}$	+ ·25$_{13}$	+ ·15$_{4}$	+ ·41$_{4}$	+ ·58$_{6}$	+ ·56$_{6}$	+ ·57$_{9}$	+ ·38$_{56}$
20 – 10	+ ·39$_{3}$	+ ·28$_{7}$	+ ·43$_{8}$	+ ·37$_{8}$	+ ·62$_{5}$	+ ·61$_{6}$	+ ·58$_{8}$	+ ·42$_{4}$	+ ·46$_{49}$
10 – 0	+ ·47$_{11}$	+ ·53$_{5}$	+ ·23$_{6}$	+ ·30$_{8}$	+ ·56$_{5}$	+ ·53$_{7}$	+ ·57$_{5}$	+ ·38$_{7}$	+ ·41$_{54}$
0 – −10	+ ·17$_{5}$	+ ·40$_{9}$	+ ·02$_{5}$	+ ·14$_{4}$	+ ·56$_{8}$	+ ·45$_{5}$	+ ·51$_{9}$	+ ·33$_{8}$	+ ·36$_{53}$
−10 – −20	+ ·40$_{2}$	+ ·37$_{3}$	+ ·09$_{2}$	+ ·13$_{2}$	+ ·38$_{4}$	+ ·61$_{3}$	+ ·54$_{3}$	+ ·69$_{4}$	+ ·44$_{22}$

TABLE XXII—Δ α (0 – Ei)

° °	s	s	s	s	s	s	s	s	s
90 – 80	−0·560$_{2}$	−0·121$_{3}$	−0·331$_{3}$	+0·009$_{3}$	−0·208$_{2}$	+0·125$_{3}$	+0·125$_{3}$	+0·088$_{3}$	−0·084$_{22}$
80 – 70	+ ·062$_{5}$	− ·002$_{5}$	+ ·018$_{3}$	+ ·101$_{2}$	+ ·008$_{6}$	+ ·042$_{5}$	+ ·053$_{7}$	+ ·023$_{5}$	+ ·031$_{38}$
70 – 60	+ ·039$_{5}$	+ ·020$_{2}$	+ ·047$_{3}$	+ ·063$_{5}$	+ ·069$_{4}$	+ ·035$_{4}$	+ ·029$_{4}$	+ ·054$_{5}$	+ ·047$_{32}$
60 – 50	+ ·057$_{8}$	+ ·050$_{3}$	+ ·053$_{4}$	+ ·053$_{5}$	+ ·064$_{5}$	+ ·040$_{7}$	+ ·040$_{5}$	+ ·044$_{4}$	+ ·050$_{41}$
50 – 40	+ ·033$_{4}$	+ ·037$_{10}$	+ ·065$_{7}$	+ ·058$_{5}$	+ ·069$_{5}$	+ ·044$_{5}$	+ ·025$_{5}$	+ ·040$_{7}$	+ ·046$_{48}$
40 – 30	+ ·047$_{4}$	+ ·062$_{6}$	+ ·066$_{6}$	+ ·073$_{6}$	+ ·055$_{4}$	+ ·060$_{6}$	+ ·066$_{5}$	+ ·060$_{2}$	+ ·062$_{39}$
30 – 20	+ ·037$_{9}$	+ ·061$_{5}$	+ ·082$_{13}$	+ ·074$_{4}$	+ ·084$_{4}$	+ ·060$_{6}$	+ ·069$_{6}$	+ ·060$_{9}$	+ ·065$_{56}$
20 – 10	+ ·037$_{3}$	+ ·050$_{7}$	+ ·069$_{8}$	+ ·061$_{8}$	+ ·058$_{5}$	+ ·057$_{6}$	+ ·044$_{8}$	+ ·030$_{4}$	+ ·053$_{49}$
10 – 0	+ ·037$_{11}$	+ ·051$_{5}$	+ ·066$_{6}$	+ ·055$_{8}$	+ ·042$_{5}$	+ ·056$_{7}$	+ ·039$_{5}$	+ ·032$_{7}$	+ ·046$_{54}$
0 – −10	+ ·026$_{5}$	+ ·051$_{9}$	+ ·080$_{5}$	+ ·058$_{4}$	+ ·058$_{8}$	+ ·057$_{5}$	+ ·030$_{9}$	+ ·028$_{8}$	+ ·046$_{53}$
−10 – −20	+ ·016$_{2}$	+ ·029$_{2}$	+ ·060$_{2}$	+ ·062$_{2}$	+ ·045$_{4}$	+ ·046$_{3}$	+ ·029$_{3}$	+ ·014$_{4}$	+ ·033$_{22}$

Δ δ (0 - Ei)

Dec. \ R.A.	h h 0 - 3	h h 3 - 6	h h 6 - 9	h h 9 - 12	h h 12 - 15	h h 15 - 18	h h 18 - 21	h h 21 - 0	Mean
° °	″	″	″	″	″	″	″	″	″
90 - 80	+0·06$_{2}$	−0·09$_{3}$	−0·27$_{4}$	−0·20$_{3}$	−0·10$_{2}$	+0·24$_{3}$	−0·03$_{3}$	+0·32$_{3}$	−0·01$_{22}$
80 - 70	+ ·13$_{5}$	+ ·01$_{5}$	+ ·11$_{3}$	− ·37$_{2}$	− ·06$_{6}$	+ ·15$_{5}$	+ ·24$_{7}$	+ ·07$_{5}$	+ ·07$_{38}$
70 - 60	+ ·26$_{5}$	− ·15$_{2}$	− ·28$_{3}$	+ ·08$_{5}$	+ ·40$_{4}$	+ ·37$_{4}$	+ ·28$_{4}$	+ ·03$_{5}$	+ ·15$_{32}$
60 - 50	·00$_{8}$	+ ·15$_{3}$	− ·05$_{4}$	− ·11$_{5}$	+ ·02$_{5}$	+ ·06$_{7}$	+ ·36$_{5}$	+ ·06$_{4}$	+ ·05$_{41}$
50 - 40	+ ·17$_{4}$	− ·19$_{10}$	− ·08$_{7}$	− ·24$_{5}$	− ·07$_{5}$	− ·14$_{5}$	+ ·18$_{5}$	− ·10$_{7}$	− ·08$_{48}$
40 - 30	− ·04$_{4}$	− ·15$_{6}$	− ·48$_{6}$	− ·20$_{6}$	− ·20$_{4}$	+ ·21$_{6}$	+ ·17$_{5}$	− ·12$_{2}$	− ·11$_{39}$
30 - 20	− ·09$_{9}$	− ·16$_{5}$	− ·18$_{13}$	− ·35$_{4}$	− ·21$_{4}$	− ·03$_{6}$	− ·08$_{6}$	− ·15$_{9}$	− ·14$_{56}$
20 - 10	− ·24$_{3}$	− ·19$_{7}$	− ·11$_{8}$	− ·06$_{8}$	+ ·13$_{5}$	+ ·04$_{6}$	− ·05$_{8}$	− ·26$_{4}$	− ·08$_{49}$
10 - 0	− ·09$_{11}$	− ·09$_{5}$	− ·10$_{6}$	− ·06$_{8}$	+ ·01$_{5}$	+ ·01$_{7}$	+ ·02$_{5}$	− ·09$_{7}$	− ·06$_{54}$
0 - −10	− ·30$_{5}$	− ·03$_{9}$	+ ·05$_{5}$	− ·32$_{4}$	+ ·12$_{8}$	− ·02$_{5}$	+ ·06$_{9}$	− ·10$_{8}$	− ·03$_{53}$
−10 - −20	+ ·08$_{2}$	− ·17$_{2}$	− ·07$_{2}$	− ·28$_{2}$	+ ·24$_{4}$	+ ·04$_{3}$	+ ·14$_{3}$	+ ·24$_{4}$	+ ·06$_{22}$

TABLE XXIII—Δ α (0 - Gr.$^{1}_{25}$)

° °	s	s	s	s	s	s	s	s	s
90 - 80	−0·422$_{2}$	−0·053$_{3}$	−0·374$_{3}$	−0·043$_{3}$	−0·318$_{2}$	−0·305$_{3}$	−0·264$_{3}$	−0·371$_{3}$	−0·260$_{22}$
80 - 70	+ ·016$_{5}$	+ ·011$_{5}$	+ ·069$_{3}$	+ ·058$_{2}$	+ ·005$_{6}$	− ·077$_{5}$	− ·036$_{7}$	− ·055$_{5}$	− ·011$_{38}$
70 - 60	− ·019$_{5}$	− ·006$_{2}$	+ ·021$_{3}$	+ ·010$_{5}$	− ·012$_{4}$	− ·057$_{4}$	− ·042$_{4}$	− ·015$_{5}$	− ·016$_{32}$
60 - 50	− ·010$_{8}$	− ·002$_{3}$	− ·002$_{4}$	+ ·003$_{5}$	− ·016$_{5}$	− ·058$_{7}$	− ·055$_{5}$	− ·024$_{4}$	− ·023$_{41}$
50 - 40	− ·013$_{4}$	− ·002$_{10}$	+ ·025$_{7}$	− ·009$_{5}$	− ·006$_{5}$	− ·018$_{5}$	− ·045$_{5}$	− ·026$_{7}$	− ·010$_{48}$
40 - 30	− ·009$_{4}$	+ ·020$_{6}$	+ ·007$_{5}$	− ·001$_{6}$	− ·021$_{4}$	− ·025$_{6}$	− ·011$_{5}$	− ·001$_{2}$	− ·004$_{39}$
30 - 20	− ·014$_{9}$	+ ·009$_{5}$	+ ·013$_{13}$	+ ·018$_{4}$	+ ·008$_{4}$	− ·015$_{6}$	+ ·004$_{6}$	− ·006$_{9}$	+ ·001$_{56}$
20 - 10	− ·011$_{3}$	·000$_{7}$	+ ·003$_{8}$	+ ·002$_{8}$	− ·011$_{5}$	− ·011$_{6}$	− ·010$_{8}$	− ·022$_{4}$	− ·006$_{49}$
10 - 0	+ ·001$_{11}$	+ ·009$_{5}$	+ ·010$_{6}$	+ ·008$_{8}$	+ ·003$_{5}$	+ ·004$_{7}$	·000$_{5}$	+ ·007$_{7}$	+ ·005$_{54}$
0 - −10	− ·003$_{5}$	+ ·011$_{9}$	+ ·026$_{5}$	+ ·014$_{4}$	+ ·022$_{8}$	+ ·052$_{5}$	− ·006$_{9}$	+ ·005$_{8}$	+ ·013$_{53}$
−10 - −20	− ·002$_{2}$	− ·003$_{2}$	+ ·011$_{2}$	+ ·023$_{2}$	+ ·006$_{4}$	+ ·019$_{3}$	− ·019$_{3}$	− ·004$_{4}$	+ ·004$_{22}$

Δ δ (0 - Gr.$^{1}_{25}$)

° °	″	″	″	″	″	″	″	″	″
90 - 80	+0·15$_{2}$	−0·09$_{3}$	−0·11$_{3}$	−0·15$_{3}$	−0·13$_{2}$	+0·22$_{3}$	−0·12$_{3}$	+0·05$_{2}$	−0·03$_{22}$
80 - 70	+ ·39$_{5}$	+ ·13$_{5}$	+ ·01$_{3}$	− ·14$_{2}$	− ·06$_{6}$	+ ·14$_{5}$	+ ·25$_{7}$	+ ·43$_{5}$	+ ·27$_{38}$
70 - 60	+ ·49$_{5}$	− ·13$_{2}$	+ ·00$_{3}$	+ ·23$_{5}$	+ ·22$_{4}$	+ ·50$_{4}$	+ ·41$_{4}$	+ ·37$_{5}$	+ ·30$_{32}$
60 - 50	+ ·39$_{8}$	+ ·44$_{3}$	+ ·30$_{4}$	+ ·13$_{5}$	+ ·26$_{5}$	+ ·30$_{7}$	+ ·53$_{5}$	+ ·54$_{4}$	+ ·35$_{41}$
50 - 40	+ ·33$_{4}$	+ ·02$_{10}$	+ ·06$_{7}$	− ·32$_{5}$	+ ·06$_{5}$	− ·19$_{5}$	+ ·29$_{5}$	+ ·01$_{7}$	+ ·02$_{48}$
40 - 30	+ ·26$_{4}$	+ ·22$_{6}$	− ·23$_{6}$	+ ·15$_{6}$	·00$_{4}$	+ ·38$_{6}$	+ ·50$_{5}$	+ ·28$_{2}$	+ ·19$_{39}$
30 - 20	+ ·34$_{9}$	+ ·09$_{5}$	+ ·21$_{13}$	− ·06$_{4}$	+ ·03$_{4}$	+ ·24$_{6}$	+ ·33$_{6}$	+ ·20$_{9}$	+ ·20$_{56}$
20 - 10	+ ·15$_{3}$	+ ·39$_{7}$	+ ·34$_{8}$	+ ·31$_{3}$	+ ·51$_{5}$	+ ·08$_{6}$	+ ·38$_{8}$	+ ·19$_{4}$	+ ·31$_{49}$
10 - 0	+ ·44$_{11}$	+ ·43$_{5}$	+ ·21$_{6}$	+ ·36$_{8}$	+ ·29$_{5}$	+ ·31$_{7}$	+ ·44$_{5}$	+ ·38$_{7}$	+ ·36$_{54}$
0 - −10	+ ·17$_{5}$	+ ·32$_{9}$	+ ·20$_{5}$	+ ·00$_{4}$	+ ·26$_{8}$	+ ·20$_{5}$	+ ·27$_{9}$	+ ·31$_{8}$	+ ·24$_{53}$
−10 - −20	+ ·09$_{2}$	+ ·33$_{2}$	+ ·25$_{2}$	− ·19$_{2}$	+ ·16$_{4}$	− ·03$_{3}$	+ ·26$_{3}$	+ ·48$_{4}$	+ ·19$_{22}$

EXPLANATION OF THE SEPARATE COLUMNS

Column 1—The ordinal number of this catalogue for the stars arranged in order of right ascension.

Column 2—The star's name used in a list prepared for latitude work in Canada by R. Meldrum Stewart. These were taken from Boss' P.G.C., various Greenwich catalogues, and the Astronomiche Gesellschaft Catalogues for 1875.

Column 3—The magnitude of the star.

Column 4—The mean right ascension for 1925. Positions given to two places of decimals have not been reduced with proper motion. Positions given to three decimal places have been reduced with Boss P.G.C. proper motion.

Columns 5 and 6—Precession and secular variation. Many of these were computed, using Downing's Tables. Others were taken from Boss P.G.C., and the first Greenwich Catalogue of Stars for 1925·0.

Column 7—The proper motion, taken from either Boss P.G.C., or Boss G.C. Stars indicated by an asterisk (*) have been reduced with proper motion. The other stars have not been reduced with proper motion.

Column 8—The mean declination for 1925·0. Stars appearing to only one decimal place have been reduced without proper motion. Stars given to two decimal places have been reduced with proper motion.

Columns 9 and 10—The precession and secular variation—some computed using Downing's Tables. Others taken from Boss' P.G.C., and the First Greenwich Catalogue of Stars for 1925·0.

Column 11—Proper motion in declination taken from Boss' P.G.C., or Boss' G.C. Stars indicated by an asterisk (*) have been reduced with proper motion. Other stars were reduced without proper motion.

Column 12—The number indicates the observations in right ascension and declination, respectively. A few stars had observations in only one co-ordinate.

Columns 13 and 14—Mean epochs of observations for right ascension and declination, respectively.

Column 15—The number in Boss' P.G.C., or in Boss' G.C.

No.	STAR	M	1925·0 R.A.	1925·0 Prec.	1925·0 Sec. Var.	P.M. s ·0000	1925·0 Dec.	1925·0 Prec.	1925·0 Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
1	9 Cass	6·1	0 0 21·27	+3·0766	+·0578	− 9	+61 52 13·2	+20·045	−·010	+ 6	2, 3	17·81, 16·81	6180
2	Gr. 4219	6·3	0 45·13	+3·0767	+·0286	+ 6	+41 40 31·4	+20·045	−·010	− 23	6, 6	12·23, 12·05	6183
3	Gr. 4220	6·0	0 47·30	+3·0835	+·0718	+160	+64 44 54·2	+20·045	−·011	+ 36	3, 3	19·73, 20·76	6184
4	Pi 23h, 267	6·3	0 57·32	+3·0766	+·0222	+610	+34 14 24·6	+20·044	−·010	+100	7, 6	19·65, 20·94	44
5	Br. 3207	6·9	1 2·27	+3·0826	+·0503	+ 22	+58 6 53·3	+20·045	−·011	− 25	3, 3	20·84, 20·84	6186
6	Pi 23h, 268	6·7	0 1 4·13	+3·0758	+·0167	+ 79	+26 13 53·0	+20·044	−·011	− 9	6, 5	21·22, 21·12	47
7	Gr. 4222	6·0	1 12·91	+3·0855	+·0560	+ 19	+60 53 47·3	+20·045	−·011	+ 12	5, 5	13·56, 12·95	6187
8	Br. 3210	6·2	2 19·55	+3·0946	+·0505	+330	+58 1 6·9	+20·044	−·014	+ 38	5, 5	21·33, 21 33	3
9	10 Cass	5·6	2 31·83	+3·1028	+·0638	+ 12	+63 46 43·9	+20·044	−·014	+ 5	1, 1	11·79, 11·79	5
10	α Andr. S	2·0	4 30·398	+3·0872	+·0186	+106*	+28 40 35·14	+20·041	−·017	−161*	22, 21	16·84, 17·22	10
11	BD + 35°, 8	5·9	0 4 49·02	+3·0934	+·0242	− 87	+36 12 45·5	+20·040	−·018	−145	6, 5	17·11, 17·60	131
12	BD + 24°, 3	6·2	4 59·59	+3·0864	+·0162	+ 81	+25 2 39·7	+20·040	−·018	+ 33	6, 7	20·58, 20·47	138
13	β Cass	2·2	5 9·825	+3·1224	+·0529	+679*	+58 44 10·65	+20·040	−·019	−181*	11, 12	19·48, 18·83	12
14	87 Pegs	5·8	5 10·07	+3·0824	+·0119	+ 92	+17 47 42·3	+20·040	−·019	− 33	3, 3	20·80, 20·80	13
15	22 Andr	5·2	6 24·93	+3·1111	+·0335	+ 4	+45 39 18·2	+20·037	−·021	− 1	9, 9	13·76, 13·31	19
16	Gr. 9	6·3	0 8 3·25	+3·1244	+·0362	+ 54	+47 44 5·8	+20·032	−·025	+ 18	3, 5	13·15, 13·20	204
17	γ Pegs F	2·9	9 22·270	+3·0872	+·0103	0*	+14 45 59·88	+20·028	−·027	− 13*	14, 38	17·13, 17·36	27
18	BD + 26°, 13	6·3	9 31·00	+3·1005	+·0176	− 9	+26 34 16·4	+20·027	−·027	− 44	4, 5	18·25, 16·95	243
19	BD + 32°, 21	6·0	10 8·33	+3·1109	+·0221	− 12	+32 47 22·7	+20·025	−·029	− 21	5, 6	20·99, 20·80	256
20	Pi 0h, 13	6·7	10 38·06	+3·1259	+·0289	+ 38	+40 36 54·6	+20·023	−·030	+ 27	5, 7	21·80, 21·97	269
21	χ Pegs	5·0	0 10 43·11	+3·0953	+·0134	+ 66	+19 47 23·2	+20·023	−·030	+ 11	2, 2	21·26, 21·26	31
22	BD + 21°, 13	6·0	11 2·84	+3·0987	+·0147	+ 44	+21 52 2·7	+20·021	−·030	− 10	7, 8	22·44, 22·35	281
23	Pi 0h, 18	6·5	11 12·72	+3·1122	+·0209	+ 24	+31 7 8·1	+20·021	−·031	− 4	5, 5	21·47, 21·50	290
24	Br. 6	6·5	11 56·97	+3·3636	+·1506	+ 69	+76 32 2·9	+20·017	−·034	− 1	4, 5	11·74, 11·73	37
25	Gr. 30	6·0	12 24·76	+3·1406	+·0317	+ 35	+43 10 44·0	+20·015	−·033	− 29	6, 5	20·74, 20·74	310
26	θ Andr	4·5	0 13 10·08	+3·1333	+·0270	− 41	+38 15 55·0	+20·012	−·035	− 20	1, 2	11·62, 11·70	43
27	Gr 33	6·0	13 11·18	+3·1568	+·0369	+ 28	+47 31 50·9	+20·012	−·035	− 12	4, 4	18·80, 18·80	44
28	Gr 35	6·2	13 44·01	+3·1717	+·0418	− 12	+51 00 59·4	+20·008	−·036	− 1	3, 3	20·84, 20·84	46
29	Pi 0h, 38	6·0	14 42·93	+3·1245	+·0213	+ 67	+31 6 3·2	+20·003	−·038	− 3	4, 4	20·77, 20·77	51
30	ι Ceti F	3·7	15 36·394	+3·0580	−·0020	− 12*	− 9 14 22·31	+19·998	−·039	− 32*	6, 21	19·66, 20·09	53
31	Gr 43	6·2	0 15 44·55	+3·1506	+·0293	− 27	+40 18 48·6	+19·997	−·040	− 8	5, 5	20·94, 20·94	394
32	Gr 44	7·0	16 5·71	+3·1786	+·0386	0	+48 26 58·6	+19·995	−·041	− 16	6, 6	21·25, 21·25	400
33	BD + 30°, 42	5·6	16 29·02	+3·1293	+·0210	+ 13	+30 31 9·7	+19·993	−·041	+ 5	5, 5	19·98, 19·98	408
34	BD + 32°, 45	6·0	16 49·89	+3·1352	+·0225	− 23	+32 29 43·5	+19·991	−·042	− 13	5, 5	19·38, 17·35	414
35	Gr 57	7·0	20 5·46	+3·1852	+·0337	0	+43 50 57·6	+19·968	−·049	− 15	4, 4	20·09, 20·09	66
36	Gr 58	5·6	0 20 12·67	+3·2214	+·0441	+ 17	+51 36 16·0	+19·967	−·050	− 5	5, 6	14·01, 13·64	67
37	Br 23	5·9	21 2·38	+3·2332	+·0460	+ 35	+52 37 53·6	+19·960	−·052	− 3	5, 5	12·77, 12·73	71
38	47 Pisc	5·4	24 8·08	+3·1170	+·0129	+ 81	+17 28 40·4	+19·933	−·057	+ 16	7, 6	19·82, 20·15	81
39	Pi 0h, 74	5·3	24 11·28	+3·2087	+·0344	+ 92	+43 58 47·4	+19·933	−·058	− 18	5, 6	12 72, 12·53	82
40	BD + 36°, 66	6·6	24 57·41	+3·1803	+·0267	− 13	+36 29 7·1	+19·926	−·059	+ 4	9, 10	15·57, 15·48	563
41	BD + 59°, 68	6·0	0 26 8·08	+3·3317	+·0623	+ 42	+59 33 47·5	+19·914	−·064	− 34	4, 5	19·27, 17·74	87
42	12 Ceti	6·3	26 12·66	+3·0611	+·0011	+ 5	− 4 22 17·6	+19·914	−·059	− 7	2, 2	12·77, 12·77	90
43	49 Pisc	7·2	26 53·19	+3·1163	+·0119	− 27	+15 37 24·0	+19·907	−·062	− 7	3, 3	20·72, 20·72	93
44	B.A.C. 120	6·0	27 26·30	+3·1771	+·0240	+ 35	+33 10 4·5	+19·901	−·064	− 19	6, 5	18·70, 18·87	611
45	λ Cass	4·9	27 37·40	+3·2948	+·0501	+ 52	+54 6 30·5	+19·900	−·066	− 12	4, 3	13·27, 13·75	97
46	κ Cass S	4·2	0 28 43·328	+3·3939	+·0722	+ 16*	+62 31 5·49	+19·888	−·070	+ 1*	12, 16	15·86, 15·65	103
47	Br. 42	6·6	28 49·35	+3·5479	+·1133	+ 96	+70 34 5·2	+19·886	−·074	+ 3	7, 9	20·81, 20·79	105
48	Pi 0h, 103	6·7	28 51·44	+3·1616	+·0200	+ 10	+27 51 59·0	+19·886	−·067	+ 6	2, 2	20·76, 20·76	106
49	BD + 54°, 101	6·5	29 0·09	+3·3089	+·0512	+ 79	+54 28 55·4	+19·885	−·069	− 39	6, 6	20·52, 20·52	650
50	Pi 0h, 114	7·5	31 18·00	+3·3213	+·0505	+ 65	+53 47 25·1	+19·858	−·074	+ 14	4, 4	20·78, 20·78	115

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			h m s	s	s		° ′ ″	″	″				
51	13 Ceti.....F	5·4	0 31 23·209	+3·0600	+·0016	+272*	− 4 00 19·65	+19·857	−·070	− 18*	8, 25	21·03, 21·33	116
52	Br. 49.....	5·3	31 57·15	+3·3262	+·0506	+ 22	+53 45 20·0	+19·851	−·076	+ 7	3, 3	20·43, 20·43	118
53	BD + 26°, 91.....	6·1	32 21·80	+3·1680	+·0195	+ 6	+26 50 31·6	+19·845	−·074	− 13	5, 5	20·77, 20·77	722
54	Pi 0h, 124.....	5·5	32 41·39	+3·2567	+·0357	− 21	+44 4 30·5	+19·841	−·076	+ 26	3, 3	20·82, 20·82	121
55	ζ Cass.....S	3·8	32 46·953	+3·3301	+·0502	+ 23*	+53 29 4·14	+19·840	−·078	− 9*	10, 10	16·00, 15·98	122
56	π Andr.....S	4·4	0 32 52·174	+3·1982	+·0246	+ 17*	+33 18 24·26	+19·839	−·075	− 9*	9, 9	15·57, 15·58	123
57	Pi 0h, 127.....	6·5	33 10·02	+3·1570	+·0173	− 12	+23 36 8·6	+19·835	−·075	− 42	5, 5	20·45, 20·45	735
58	Pi 0h, 128.....	5·7	33 19·86	+3·2083	+·0261	− 2	+34 59 13·0	+19·832	−·076	+ 19	4, 4	18·75, 18·75	125
59	ε Andr.....	4·5	34 35·44	+3·1837	+·0212	−173	+28 54 17·7	+19·817	−·078	−248	5, 4	14·99, 15·80	130
60	Gr. 113.....	5·8	35 0·63	+3·3062	+·0427	+ 14	+48 56 33·4	+19·811	−·082	− 13	4, 5	13·69, 13·89	131
61	δ Andr.....	3·4	0 35 18·59	+3·1934	+·0225	+107	+30 27 3·5	+19·807	−·080	− 86	9, 6	13·13, 13·78	132
62	55 Pisc.....	5·6	35 58·47	+3·1531	+·0158	+ 19	+21 1 38·1	+19·798	−·081	− 38	2, 2	18·38, 18·38	134
63	α Cass.....S	2·3	36 14·381	+3,3863	+·0566	+ 61*	+56 7 34·99	+19·795	−·086	− 31*	12, 11	18·90, 18·35	135
64	32 Andr.....	5·5	37 2·83	+3·2473	+·0305	− 5	+39 2 50·2	+19·783	−·085	− 4	6, 6	17·34, 17·34	138
65	Gr. 118.....	7·1	37 5·33	+3·5445	+·0881	+132	+65 27 29·7	+19·783	−·092	− 61	7, 7	20·16, 20·62	816
66	Gr. 120.....	5·9	0 37 34·25	+3·5568	+·0897	− 8	+65 44 11·2	+19·776	−·093	− 4	5, 5	20·60, 20·60	825
67	Br. 64.....	6·9	37 56·15	+3·2594	+·0319	− 20	+40 16 42·8	+19·771	−·087	− 62	5, 5	17·82, 17·82	829
68	Br. 63.....	6·5	38 11·53	+3·4323	+·0628	+ 45	+58 20 33·2	+19·767	−·092	− 3	6, 5	17·72, 16·92	837
69	Br. 68.....	5·8	40 15·82	+3·3273	+·0413	− 24	+47 27 12·6	+19·736	−·093	+ 9	4, 4	15·30, 15·30	149
70	ο Cass.....S	4·9	40 32·191	+3·3328	+·0420	+ 22*	+47 52 27·19	+19·732	−·094	− 5*	11, 12	18·37, 17·83	152
71	21 Cass.....S	5·7	0 40 39·884	+3·9278	+·1696	− 53*	+74 34 42·54	−19·730	−·110	− 24*	20, 20	19·05, 20·45	150
72	BD + 68°, 49.....	6·4	41 54·98	+3·7029	+·1113	+365	+68 54 55·1	+19·710	−·106	+ 7	5, 5	20·08, 20·08	921
73	Gr. 137.....	6·6	41 56·94	+3·4189	+·0552	+ 16	+54 53 44·5	+19·710	−·099	− 9	5, 5	19·62, 19·62	916
74	Gr. 140.....	5·9	42 1·17	+3·3118	+·0374	+ 24	+44 27 6·2	+19·709	−·096	− 7	4, 4	15·73, 15·02	918
75	BD + 58°, 101.....	6·7	42 19·34	+3·4838	+·0664	− 11	+59 9 53·1	+19·704	−·102	+ 3	5, 6	19·02, 17·81	926
76	BD + 71°, 37.....	6·0	0 43 13·47	+3·8561	+·1425	+289	+72 15 54·1	+19·689	−·114	+ 30	10, 9	20·58, 20·68	943
77	ζ Andr.....S	4·2	43 21·529	+3·1840	+·0182	− 74*	+23 51 33·96	+19·687	−·096	− 80*	11, 10	20·09, 21·21	164
78	61 Pisc.....	6·8	43 55·82	+3·1681	+·0160	+115	+20 30 56·7	+19·677	−·097	+ 10	3, 3	21·07, 21·07	167
79	ν Cass.....	5·0	44 34·40	+3·3867	+·0472	+ 35	+50 33 33·6	+19·666	−·104	− 11	1, 1	11·84, 11·84	172
80	δ Pisc.....F	4·6	44 47·352	+3·1055	+·0081	+ 55*	+ 7 10 37·85	+19·663	−·096	− 44*	20, 37	17·37, 19·14	173
81	64 Pisc.....	5·3	0 45 2·01	+3·1503	+·0134	− 14	+16 32 8·3	+19·659	−·098	−203	3, 2	21·39, 21·24	174
82	Pi 0h, 196.....	6·4	46 6·45	+3·3361	+·0381	+ 65	+44 35 37·6	+19·640	−·106	− 3	3, 2	20·81, 20·32	180
83	Pi 0h, 199.....	6·6	46 39·25	+3·4075	+·0483	+135	+51 5 59·8	+19·631	−·109	− 2	2, 3	21·75, 21·51	183
84	BD + 61°, 178.....	6·2	46 46·49	+3·5696	+·0752	− 3	+61 23 50·9	+19·629	−·114	+ 11	5, 5	21·34, 21·34	1014
85	Pi 0h, 203.....	6·4	47 16·42	+3·1428	+·0486	− 13	+51 9 48·7	+19·621	−·110	− 12	2, 2	21·41, 21·41	186
86	20 Ceti.....F	5·0	0 49 10·409	+3·0651	+·0038	− 4*	− 1 33 5·01	+19·585	−·104	− 16*	6, 6	16·24, 16·24	191
87	BD + 36°, 148.....	6·6	49 20·66	+3·2880	+·0296	+ 8	+37 0 43·0	+19·582	−·111	− 45	5, 5	20·44, 20·44	1060
88	Pi 0h, 211.....	6·5	49 27·18	+3·4427	+·0512	+ 94	+52 16 58·0	+19·580	−·116	− 26	3, 3	12·79, 12·79	192
89	26 Cass.....	5·1	50 32·17	+3·5510	+·0670	− 38	+58 34 1·9	+19·559	−·122	− 44	1, 3	20·74, 14·77	193
90	Gr. 171.....	6·3	50 48·93	+3·4023	+·0441	− 26	+48 16 20·4	+19·554	−·117	− 5	4, 4	20·10, 20·10	1090
91	BD + 23°, 126.....	6·3	0 51 13·56	+3·2056	+·0188	+ 13	+24 9 3·6	+19·546	−·112	− 13	4, 4	21·59, 22·04	1096
92	BD + 57°, 172.....	7·0	51 44·89	+3·5439	+·0644	+ 46	+57 35 27·2	+19·536	−·124	− 11	5, 5	21·40, 21·40	1104
93	χ Pisc.....	6·2	51 56·12	+3·2245	+·0208	− 1	+26 48 11·2	+19·532	−·114	+ 6	2, 2	20·77, 20·77	198
94	γ Cass.....S	2·0	52 9·992	+3·6017	+·0731	+ 4*	+60 18 40·04	+19·528	−·127	− 2*	10, 11	20·53, 19·74	199
95	28 Cass.....	4·9	52 11·05	+3·5705	+·0680	−116	+58 46 35·1	+19·527	−·125	− 42	3, 3	20·21, 20·21	200
96	Gr. 184 (m).....	5·8	0 52 15·02	+3·5951	+·0719	+ 52	+59 57 25·6	+19·526	−·127	0	3, 3	22·20, 22·20	201
97	Gr. 188.....	6·7	52 18·32	+3·3505	+·0362	− 9	+42 34 22·8	+19·525	−·119	− 7	3, 3	21·55, 21·55	1118
98	μ Andr.....S	3·9	52 34·981	+3·3110	+·0310	+128*	+38 5 34·36	+19·519	−·118	+ 27*	14, 13	18·85, 19·70	203
99	η Andr.....	4·6	53 11·88	+3·2034	+·0181	− 31	+23 0 46·7	+19·507	−·116	− 42	2, 2	20·38, 20·38	206
100	Gr. 193.....	6·2	53 24·46	+3·3861	+·0403	+ 8	+45 26 3·3	+19·503	−·122	+ 7	5, 5	20·16, 20·77	1142

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			h m s	s	s		° ′ ″	″	″				
101	Gr. 192	6·1	0 53 44·98	+3·7686	+·0989	+ 72	+65 56 49·5	+19·495	−·136	+ 13	2, 2	21·76, 21·76	208
102	Pi 0h, 242	6·4	54 7·18	+3·2801	+·0266	+ 37	+33 32 50·4	+19·488	−·120	− 58	6, 6	21·83, 21·83	1159
103	Gr. 198	6·6	54 26·42	+3·4057	+·0421	+ 16	+46 37 55·4	+19·482	−·125	− 1	5, 5	21·36, 21·36	1169
104	43H Ceph. P	4·6	58 11·056	+7·7048	+1·6047	+ 79*	+85 51 20·31	+19·402	−·291	− 6*	190, 142	18·44, 17·53	218
105	Gr. 220	6·2	58 41·98	+3·4354	+·0431	+ 82	+46 58 24·8	+19·391	−·135	− 14	5, 5	21·34, 21·34	1257
106	Gr. 219	6·2	0 58 58·95	+3·6782	+·0765	− 7	+60 40 19·7	+19·384	−·145	+ 9	6, 7	21·81, 21·66	1263
107	ε Pisc. F	4·5	59 2·904	+3·1176	+·0090	− 54*	+ 7 29 11·90	+19·383	−·124	+ 28*	2, 4	19·76, 20·10	226
108	BD + 51°, 220	6·4	59 37·23	+3·5144	+·0526	+ 10	+52 6 3·8	+19·370	−·140	− 56	5, 5	21·17, 21·17	1275
109	Gr. 225	5·9	59 40·71	+3·6981	+·0786	− 96	+61 10 41·9	+19·369	−·147	− 17	6, 6	22·38, 22·38	1279
110	B.A.C. 299	6·7	1 00 21·35	+3·2677	+·0232	+ 62	+29 15 33·9	+19·354	−·132	−113	5, 5	21·89, 21·89	1290
111	Gr. 232	6·9	1 00 22 91	+3·3606	+·0334	+ 73	+39 35 22·5	+19·353	−·136	− 21	4, 5	22·84, 22·86	231
112	74¹ Pisc.	5·5	01 39·43	+3·2097	+·0173	+ 37	+21 4 19·9	+19·324	−·133	− 17	3, 3	21·85, 21·85	235
113	74² Pisc.	5·8	01 40·16	+3·2097	+·0172	+ 28	+21 3 51·6	+19·323	−·133	− 25	2, 2	21·28, 21·28	236
114	76 Pisc.	6·8	02 3·36	+3·2943	+·0255	+ 4	+31 46 50·3	+19·314	−·137	− 19	3, 3	21·08, 21·08	241
115	BD + 56°, 196	6·5	02 26·16	+3·6166	+·0638	+134	+56 32 11·1	+19·305	−·150	−128	5, 5	19·31, 19·31	1339
116	Pi 0h, 279	6·9	1 02 41·18	+3·5535	+·0553	+ 23	+53 5 50·1	+19·300	−·148	+ 2	5, 5	21·50, 21·50	1343
117	μ Cass.	5·4	03 10·89	+3·5844	+·0588	+3930	+54 33 11·1	+19·286	−·150	−1562	4, 4	12·55, 13·28	244
118	79 Pisc.	5·7	03 55·54	+3·2092	+·0168	+ 60	+20 20 27·4	+19·270	−·137	− 92	3, 3	20·53, 20·53	249
119	η Ceti F	3·5	04 48·997	+3·0032	+·0002	+141*	−10 34 45·80	+19·248	−·130	−133*	16, 28	20·63, 21·04	255
120	β Andr. S	2·1	05 31·554	+3·3389	+·0290	+149*	+35 13 23·88	+19·231	−·145	−115*	10, 11	15·16, 15·12	259
121	44H Ceph. S	5·8	1 05 43·718	+5·0687	+·3522	+328*	+79 16 31·06	+19·226	−·217	+ 8*	20, 73	20·30, 20·33	256
122	44 Andr.	5·9	06 2·87	+3·4111	+·0363	−122	+41 41 0·1	+19·218	−·148	− 46	3, 3	17·09, 17·09	262
123	Pi 0h, 311	6·9	06 12·62	+3·1768	+·0185	+ 19	+15 16 30·7	+19·214	−·140	− 20	5, 5	21·03, 21·03	1411
124	Pi 0h, 310	6·1	06 14·99	+3·2509	+·0342	− 2	+25 3 39·4	+19·213	−·143	−112	5, 6	21·77, 21·65	1415
125	θ Cass.	4·5	06 31·05	+3·6139	+·0600	+265	+54 45 6·0	+19·206	−·159	− 18	2, 3	11·77, 11·83	264
126	45 Andr.	6·0	1 6 57·00	+3·3663	+·0312	− 18	+37 19 32·1	+19·195	−·149	− 3	5, 5	21·01, 21·01	268
127	g Pisc.	5·3	6 58·28	+3·3043	+·0251	− 17	+31 1 34·2	+19·195	−·147	− 14	2, 2	20·82, 20·82	269
128	χ Pisc.	4·8	7 25·06	+3·2187	+·0172	+ 14	+20 38 10·8	+19·184	−·144	+ 6	3, 3	18·52, 18·52	270
129	τ Pisc.	4·6	7 31·40	+3·2941	+·0240	+ 55	+29 41 31·3	+19·181	−·148	− 38	5, 4	14·24, 14·84	271
130	Pi 1h, 9	6·7	8 12·89	+3·4638	+·0411	+ 33	+44 56 21·1	+19·163	−·156	+ 23	3, 3	20·11, 20·11	274
131	Br. 153	6·5	1 8 51·24	+3·2981	+·0455	+ 13	+29 40 2·2	+19·147	−·150	− 32	5, 5	16·37, 16·37	1462
132	ψ Pisc.	4·7	9 40·29	+3·2524	+·0198	+ 16	+24 11 13·3	+19·126	−·150	− 41	2, 3	12·67, 12·42	281
133	Br. 137	6·4	9 48·65	+5·2378	+·3750	−174	+79 30 43·8	+19·122	−·237	+ 62	10, 9	20·04, 20·90	276
134	BD + 27°, 196	6·5	9 57·30	+3·2875	+·0229	+ 58	+28 8 1·3	+19·118	−·152	− 46	5, 5	18·88, 18·88	1480
135	Br. 151	6·4	10 46·76	+4·2761	+·1554	+ 15	+71 20 51·4	+19·096	−·198	+ 10	9, 11	18·95, 19·62	1505
136	Gr. 277	6·8	1 11 58·64	+3·5263	+·0459	+ 15	+47 41 10·9	+19·064	−·167	− 2	6, 6	20·79, 20·79	1519
137	Pi 1h, 29	6·5	12 7·56	+3·3385	+·0270	+ 11	+32 43 10·7	+19·060	−·159	− 32	4, 5	16·54, 15·79	1521
138	Gr. 281	6·8	12 42·57	+3·4826	+·0409	+ 11	+44 30 26·7	+19·044	−·166	− 43	4, 5	21·32, 21·61	1539
139	B.A.C. 379	7·1	13 9·32	+4·0814	+·1182	− 13	+67 25 17·9	+19·032	−·194	+ 1	2, 2	21·82, 21·82	289
140	BD + 30°, 196	6·8	13 13·99	+3·3285	+·0258	− 43	+31 20 57·6	+19·030	−·160	+ 4	5, 6	22·04, 22·18	1544
141	Pi 1h, 31	6·3	1 13 44·30	+3·5264	+·0449	+ 14	+47 1 29·7	+19·016	−·171	− 1	3, 3	20·77, 17·13	1565
142	89 Pisc. F	5·4	13 55·701	+3·0966	+·0074	− 34*	+ 3 13 11·68	+19·011	−·151	− 23*	19, 28	18·88, 20·07	295
143	ν Pisc. S	4·8	15 20·352	+3·2914	+·0221	+ 17*	+26 52 12·86	+18·971	−·163	− 12*	16, 14	13·32, 16·98	300
144	φ Cass.	5·2	15 21·02	+3·7590	+·0706	+ 12	+57 50 16·4	+18·971	−·185	+ 5	1, 2	11·69, 12·22	298
145	35 Cass.	6·6	16 3·45	+3·9761	+·0985	+ 90	+64 15 56·1	+18·951	−·198	− 14	2, 2	20·78, 20·78	301
146	l Pisc.	5·5	1 16 58·23	+3·3104	+·0234	+ 18	+28 20 48·5	+18·925	−·167	− 76	2, 3	20·86, 17·88	303
147	Br. 166	6·2	17 6·62	+5·2097	+·3314	− 17	+78 20 1·7	+18·921	−·259	+ 2	10, 11	20·00, 20·39	1642
148	ξ Andr.	5·1	17 54·89	+3·5205	+·0423	+ 39	+45 8 10·6	+18·897	−·179	+ 4	4, 7	12·33, 12·23	304
149	BD + 19°, 226	6·3	19 21·55	+3·2385	+·0173	− 8	+20 4 39·2	+18·855	−·168	− 6	5, 4	19·92, 19·42	1677
150	Pi 1h, 56	6·3	19 21·89	+3·3770	+·0285	+182	+33 51 6·3	+18·855	−·311	+118	5, 4	19·48, 20·87	1680

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			h m s	s	s		° ′ ″	″	″				
151	47 Andr.	5·7	1 19 22·67	+3·4187	+·0321	+ 62	+37 19 26·4	+18·854	−·177	− 14	5, 6	20·25, 20·17	307
152	Pi 1h, 52	6·5	20 13·81	+4·3735	+·1525	+ 35	+70 35 23·3	+18·829	−·227	− 7	12, 15	20·22, 20·28	1700
153	θ Ceti F	3·7	20 16·449	+3·0037	+·0020	− 54*	− 8 34 11·87	+18·828	−·158	−213*	12, 23	16·62, 17·13	313
154	ψ Cass. S	5·1	20 36·642	+4·1975	+·1242	+140*	+67 44 21·33	+18·818	−·219	+ 34*	9, 9	19·39, 19·39	310
155	δ Cass. S	2·6	20 53·592	+3·8680	+·0789	+401*	+59 50 45·97	+18·809	−·203	− 46*	9, 12	19·96, 18·83	314
156	BD + 22°, 226	6·3	1 21 29·57	+3·2714	+·0195	+ 12	+23 7 19·2	+18·791	−·174	− 37	6, 6	21·57, 21·57	1722
157	Pi 1h, 69	6·1	21 53·50	+3·5098	+·0395	+ 92	+43 4 9·8	+18·778	−·187	− 58	4, 5	21·62, 19·64	1729
158	BD + 33°, 234	6·6	22 50·07	+3·3914	+·0288	+122	+33 59 18·7	+18·750	−·183	− 10	5, 6	20·66, 20·73	1744
159	Gr. 315	7·0	24 21·04	+3·8939	+·0789	+ 14	+59 38 51·8	+18·702	−·212	+ 9	5, 5	20·59, 20·59	1784
160	BD + 65°, 175	6·2	25 36·47	+4·1533	+·1107	+139	+65 42 41·5	+18·662	−·229	− 5	5, 6	20·63, 20·87	1811
161	38 Cass.	6·0	1 25 36·81	+4·4040	+·1473	+278	+69 52 45·4	+18·662	−·242	− 66	1, 1	11·77, 11·77	327
162	η Pisc. F	3·8	27 27·990	+3·2058	+·0143	+ 20*	+14 57 34·93	+18·603	−·182	− 10*	16, 35	19·17, 18·80	335
163	BD + 35°, 292	6·7	28 29·47	+3·4312	+·0305	− 9	+35 27 30·7	+18·569	−·196	− 55	5, 5	20·94, 20·94	1867
164	BD + 57°, 320	5·8	28 32·76	+3·8769	+·0733	+ 14	+57 56 33·4	+18·587	−·221	+ 6	5, 5	21·35, 21·35	1870
165	χ Cass.	4·9	29 0·98	+3·9100	+·0768	− 44	+58 50 53·0	+18·551	−·224	− 16	1, 1	14·70, 14·70	338
166	Pi 1h, 104	6·1	1 29 56·40	+3·4558	+·0321	+ 16	+36 51 9·3	+18·521	−·200	− 16	1, 1	11·77, 11·77	340
167	BD + 40°, 328	6·6	31 26·49	+3·5192	+·0369	+122	+40 41 35·4	+18·470	−·207	+ 1	7, 6	17·42, 17·86	1925
168	Gr. 344	7·0	31 49·26	+3·6305	+·0464	− 10	+46 56 35·8	+18·457	−·214	− 14	5, 6	20·78, 20·83	1935
169	Br. 207	6·4	31 51·50	+3·6587	+·0490	− 4	+48 20 25·8	+18·456	−·216	− 13	3, 3	16·92, 16·92	346
170	ν Andr.	4·2	32 23·42	+3·5290	+·0373	−159	+41 1 51·0	+18·438	−·210	−378	3, 2	14·92, 15·94	350
171	40 Cass. S	5·6	1 32 29·184	+4·7533	+·1900	− 12*	+72 39 30·92	+18·435	−·280	− 6*	20, 20	20·00, 20·00	349
172	ν Pers. S	3·8	33 22·669	+3·6661	+·0489	+ 61*	+48 14 56·24	+18·404	−·220	−112*	11, 13	19·18, 19·54	357
173	BD + 44°, 341	6·4	34 0·22	+3·6060	+·0433	− 35	+45 1 6·2	+18·382	−·217	+ 16	5, 5	20·65, 20·65	1977
174	α U. Min. P	1·9	34 13·533	+30·9676	+27·3816	+1530*	+88 54 11·08	+18·374	−1·812	− 1*	73, 53	18·89, 18·50	325
175	Pi 1h, 130	6·8	35 26·29	+3·8029	+·0608	− 13	+53 29 17·9	+18·332	−·233	0	5, 5	20·83, 20·83	2010
176	BD + 39°, 376	7·1	1 35 38·93	+3·5322	+·0366	− 45	+40 18 16·0	+18·324	−·216	− 36	5, 5	17·31, 17·31	2014
177	Gr. 360	5·9	36 9·19	+3·5790	+·0402	+122	+42 55 8·9	+18·306	−·220	− 38	2, 3	13·83, 13·15	368
178	43 Cass.	5·7	36 45·55	+4·4056	+·1300	+ 97	+67 39 52·5	+18·285	−·271	− 2	1, 1	11·84, 11·84	370
179	42 Cass.	5·4	37 4·95	+4·6022	+·1573	+146	+70 14 39·9	+18·273	−·283	− 7	4, 5	19·65, 19·67	371
180	Pi 1h, 145	6·4	37 7·04	+3·3333	+·0217	+ 94	+25 22 3·1	+18·271	−·209	− 43	2, 2	20·84, 20·84	373
181	ν Pisc. F	4·7	1 37 31·567	+3·1221	+·0092	− 14*	+ 5 6 31·61	+18·257	−·196	+ 1*	10, 24	17·87, 18·17	378
182	44 Cass.	5·9	38 14·08	+4·0416	+·0837	+ 32	+60 10 26·5	+18·231	−·253	− 13	3, 2	17·83, 20·90	380
183	Gr. 371	7·0	38 41·98	+3·6296	+·0435	+135	+44 56 41·9	+18·214	−·229	− 15	5, 5	20·80, 20·61	2095
184	Gr. 370	6·8	38 51·91	+3·8012	+·0586	− 7	+52 30 30·5	+18·208	−·240	− 1	5, 5	21·84, 21·84	2100
185	φ Pers. S	4·2	38 56·880	+3·7466	+·0535	+ 29*	+50 18 41·72	+18·205	−·236	− 18*	11, 12	20·34, 19·61	384
186	Br. 226	6·3	1 39 19·77	+3·9423	+·0712	+ 49	+57 9 36·9	+18·191	−·249	− 36	5, 6	17·81, 18·66	2109
187	BD + 56°, 334	6·3	39 49·11	+3·9316	+·0708	+ 17	+56 42 45·1	+18·173	−·250	0	5, 5	21·97, 21·97	2116
188	Gr. 374	6·5	39 51·39	+3·6520	+·0449	− 11	+45 45 49·1	+18·172	−·232	− 26	4, 6	22·44, 22·27	2112
189	o Pisc. F	4·4	41 25·812	+3·1612	+·0113	+ 46*	+ 8 46 51·56	+18·113	−·205	+ 51*	18, 33	19·40, 18·10	393
190	Pi 1h, 159	5·8	42 16·99	+4·2290	+·1010	+878	+63 29 2·7	+18·081	−·274	−237	3, 3	11·80, 11·75	394
191	Gr. 382	7·0	1 43 11·19	+3·6720	+·0452	+ 19	+45 51 24·8	+18·047	−·241	− 55	5, 5	20·28, 20·28	2176
192	Pi 1h, 170	6·3	44 12·83	+3·5245	+·0337	+ 93	+37 34 48·6	+18·008	−·232	− 26	4, 5	13·83, 13·41	402
193	Pi 1h, 171	6·0	44 23·47	+3·4446	+·0280	−138	+32 18 37·7	+18·001	−·229	+308	3, 4	19·15, 19·85	405
194	B.A.C. 547	6·0	44 35·59	+3·7160	+·0483	− 12	+47 31 26·7	+17·993	−·246	− 2	5, 5	20·41, 20·41	2200
195	Pi 1h, 176	6·2	46 8·26	+3·8251	+·0568	+ 47	+51 33 52·5	+17·933	−·257	−113	7, 7	14·60, 14·28	409
196	ζ Ceti F	3·8	1 47 45·451	+2·9584	+·0025	+ 25*	−10 42 17·67	+17·870	−·203	− 32*	15, 29	18·97, 19·58	416
197	Br. 240	6·2	48 2·31	+3·8250	+·0559	− 12	+51 6 17·9	+17·858	−·261	− 7	5, 5	20·44, 20·44	2265
198	α Tria. S	3·4	48 48·019	+3·4144	+·0252	+ 13*	+29 12 50·96	+17·828	−·235	−232*	7, 10	18·21, 17·21	421
199	ε Cass. S	3·4	48 58·700	+4·2892	+·1012	+ 57*	+63 18 5·77	+17·821	−·294	− 17*	11, 11	20·91, 20·92	419
200	ξ Pisc. F	4·8	49 40·248	+3·1031	+·0085	+ 15*	+ 2 49 5·39	+17·793	−·216	+ 25*	6, 10	17·41, 16·63	426

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			h m s	s	s		° ′ ″	″	″				
201	126 Andr.	7·4	1 50 7·13	+3·5964	+·0371	− 1	+40 17 16·2	+17·775	−·250	+ 4	6, 7	21·13, 21·12	2302
202	Br. 250	6·9	50 22·49	+3·5984	+·0371	+ 41	+40 20 7·6	+17·765	−·250	− 64	6, 6	22·37, 22·08	2310
203	β Arietis F	2·7	50 29·556	+3·3037	+·0184	+ 68*	+20 26 31·13	+17·760	−·231	−111*	2, 4	21·28, 22·41	428
204	Pi 1h, 200	6·3	50 31·27	+3·5358	+·0327	+ 17	+36 45 38·0	+17·759	−·247	− 8	5, 5	21·63, 21·63	2312
205	Br. 253	6·2	51 27·82	+3·5419	+·0329	− 3	+36 54 39·1	+17·720	−·248	+ 3	2, 2	14·86, 14·86	430
206	BD + 60°, 398	6·9	1 53 13·07	+4·2317	+·0912	+ 22	+61 19 57·8	+17·648	−·300	− 3	8, 8	20·13, 20·00	2362
207	Gr. 416	6·8	53 16·84	+3·7463	+·0472	0	+46 43 48·5	+17·646	−·267	− 2	4, 6	16·38, 14·87	2354
208	Pi 1h, 213	6·8	53 27·78	+3·4025	+·0237	+ 20	+27 26 24·2	+17·638	−·243	− 55	5, 4	19·64, 20·08	2357
209	λ Arie	4·9	53 44·75	+3·3459	+·0205	− 68	+23 13 51·3	+17·626	−·240	− 18	1, 1	12·76, 12·76	441
210	B.A.C. 588	5·4	54 4·78	+4·3961	+·1081	+ 73	+64 15 27·4	+17·612	−·314	− 9	4, 4	13·82, 13·82	440
211	Br. 246	6·4	1 55 17·67	+5·9922	+·3499	+ 3	+77 33 14·5	+17·561	−·429	+ 4	10, 10	19·73, 19·73	2425
212	Pi 1h, 222	6·1	55 25·58	+3·3164	+·0187	+ 98	+20 41 42·2	+17·556	−·241	− 21	6, 6	20·72, 20·72	2398
213	Gr. 422	6·2	56 29·62	+5·2671	+·2202	− 58	+73 29 19·3	+17·510	−·381	0	12, 11	20·97, 20·94	2438
214	50 Cass. S	4·0	56 59·627	+5·0894	+·1927	− 83*	+72 3 34·00	+17·489	−·370	+ 23*	19, 11	18·60, 18·04	449
215	52 Cass.	6·0	57 15·95	+4·4471	+·1104	+ 6	+64 32 25·1	+17·478	−·324	− 5	2, 2	20·79, 20·79	454
216	γ Andr. S	2·1	1 59 17·226	+3·6706	+·0396	+ 42*	+41 58 14·44	+17·390	−·274	− 52*	20, 22	15·92, 16·39	468
217	Gr. 424	6·0	2 0 3·94	+7·2642	+·6101	−140	+80 56 19·0	+17·356	−·537	+ 8	12, 11	20·39, 20·32	2517
218	Br. 286	6·0	2 33·88	+3·3955	+·0221	+ 12	+25 20 51·4	+17·246	−·260	− 8	5, 6	20·09, 20·24	2534
219	α Arie. S	2·0	2 56·444	+3·3642	+·0205	+137*	+23 6 30·96	+17·229	−·258	−146*	11, 12	20·94, 20·94	477
220	58 Andr.	4·8	3 57·12	+3·6008	+·0338	+127	+37 30 15·0	+17·184	−·278	− 41	5, 7	15·11, 14·47	480
221	β Tria. S	3·0	2 5 4·468	+3·5519	+·0305	+123*	+34 37 59·92	+17·133	−·276	− 46*	14, 15	15·16, 15·28	482
222	Br. 256	6·9	5 4·95	+8·8997	+1·0327	+356	+83 12 39·8	+17·133	−·681	− 29	13, 13	20·49, 20·49	2622
223	14 Arie.	5·1	5 8·87	+3·4051	+·0224	+ 58	+25 35 9·1	+17·130	−·266	− 37	6, 6	20·32, 20·33	483
224	59 Andr.	6·4	6 19·41	+3·6332	+·0352	− 11	+38 41 11·6	+17·076	−·285	− 21	4, 3	14·91, 15·25	489
225	16 Arie.	6·3	6 55·77	+3·4093	+·0223	0	+25 35 2·3	+17·048	−·269	− 11	3, 3	20·56, 20·56	493
226	5 Tria.	6·5	2 7 1·65	+3·4983	+·0271	+ 30	+31 10 25·4	+17·044	−·276	− 9	5, 6	19·26, 19·56	2613
227	Pi 2h, 8	6·3	8 22·68	+3·3862	+·0210	+ 29	+23 48 58·0	+16·981	−·270	− 5	5, 4	21·09, 21·38	2638
228	55 Cass. S	6·3	8 34·367	+4·6828	+·1243	− 2*	+66 10 26·10	+16·972	−·370	+ 3*	11, 11	18·39, 18·30	498
229	6 Pers.	5·5	8 35·87	+3·9422	+·0557	+365	+50 43 6·6	+16·971	−·313	−169	2, 2	12·32, 12·34	500
230	ξ^1 Ceti F	4·6	9 1·317	+3·1793	+·0117	− 17*	+ 8 29 44·56	+16·951	−·254	− 7*	8, 18	21·10, 21·44	505
231	Gr. 470	6·5	2 9 13·50	+3·8423	+·0482	− 64	+47 8 6·7	+16·942	−·307	− 58	4, 5	17·60, 16·86	2668
232	BD + 47°, 590	7·1	11 6·37	+3·8614	+·0489	+ 59	+47 27 51·8	+16·853	−·312	− 69	5, 5	18·65, 18·65	2704
233	21 Arie.	5·7	11 27·21	+3·4063	+·0217	− 61	+24 41 46·6	+16·837	−·277	− 87	3, 3	20·62, 20·62	509
234	20 Arie.	6·0	11 28·08	+3·4178	+·0223	+136	+25 26 9·1	+16·835	−·278	− 60	3, 3	21·63, 21·63	510
235	7 Tria.	5·5	11 29·76	+3·5440	+·0288	− 13	+33 0 40·5	+16·835	−·287	− 31	3, 3	20·91, 20·91	508
236	Pi 2h, 22	6·8	2 11 36·27	+4·1782	+·0730	+ 18	+56 42 26·4	+16·830	−·338	0	3, 3	21·68, 21·68	507
237	8 Pers.	6·1	12 40·37	+4·2228	+·0761	+ 87	+57 33 11·0	+16·779	−·343	+ 20	2, 4	14·80, 13·26	513
238	γ Tria	4·1	12 50·90	+3·5573	+·0294	+ 34	+33 30 4·6	+16·770	−·291	− 51	4, 4	14, 12 14·12	517
239	67 Ceti	5·9	13 14·50	+2·9857	+·0051	+ 61	− 6 46 0·9	+16·752	−·246	−108	1, 1	12·76, 12·76	578
240	θ Arie. F	5·7	13 56·969	+3·3347	+·0181	− 10*	+19 33 17·86	+16·717	−·275	− 6*	17, 32	21·53, 21·89	521
241	BD + 45°, 589	6·5	2 14 21·52	+3·8418	+·0464	− 16	+46 7 37·8	+16·698	−·317	− 8	5, 5	20·68, 20·68	2777
242	c Andr.	5·4	14 25·90	+3·8669	+·0480	− 56	+47 2 5·8	+16·694	−·319	− 11	3, 3	14·97, 13·96	522
243	10 Tria.	5·4	14 35·86	+3·4714	+·0245	+ 9	+28 17 50·2	+16·687	−·287	− 2	2, 2	18·35, 18·35	526
244	Gr. 496	6·8	14 59·73	+3·6845	+·0362	+ 28	+39 29 25·5	+16·667	−·305	− 8	5, 5	20·13, 20·13	2793
245	Br. 325	6·4	15 49·57	+3·8724	+·0479	+ 1	+46 58 1·5	+16·626	−·322	− 5	3, 4	20·61, 20·72	529
246	i Pers.	5·3	2 17 6·92	+4·1680	+·0690	+ 6	+55 30 12·7	+16·563	−·349	0	4, 3	12·78, 13·08	534
247	Pi 2h, 61	6·1	18 9·85	+3·7327	+·0382	− 76	+41 3 25·8	+16·512	−·316	− 94	4, 5	16·69, 16·13	536
248	Pi 2h, 62	7·5	18 13·06	+3·7349	+·0383	+ 8	+41 8 18·4	+16·509	−·316	+ 1	4, 4	20·67, 20·67	538
249	BD + 54°, 535	6·2	18 37·91	+4·1591	+·0674	+ 9	+55 1 27·2	+16·488	−·352	− 22	6, 6	20·34, 20·34	2863
250	64 Andr.	5·5	19 25·23	+3·9723	+·0533	+ 25	+49 40 3·0	+16·449	−·338	− 40	4, 5	14·36, 13·83	542

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			h m s	s	s		° ′ ″	″	″				
251	10 Pers.	6·5	2 19 57·43	+4·2205	+·0715	− 5	+56 16 14·2	+16·422	−·359	+ 11	3, 4	20·63, 20·72	544
252	65 Andr.	5·0	20 36·63	+3·9877	+·0539	+ 27	+49 56 24·9	+16·389	−·342	− 16	3, 5	15·52, 14·05	545
253	ξ Arie.	5·6	20 47·67	+3·2124	+·0127	+ 8	+10 16 19·1	+16·380	−·277	− 15	2, 2	12·27, 12·27	546
254	BD + 26°, 409	6·5	22 46·89	+3·4646	+·0232	− 42	+26 40 37·7	+16·279	−·302	− 62	6, 7	20·58, 20·49	2940
255	12 Tria.	5·5	23 45·80	+3·5136	+·0253	− 14	+29 20 8·9	+16·229	−·307	− 87	2, 3	13·32, 12·78	559
256	ξ^2 Ceti F	4·4	2 24 10·114	+3·1850	+·0117	+ 26*	+ 8 7 28·81	+16·208	−·280	− 4*	18, 36	19·80, 19·59	560
257	BD + 22°, 354	6·1	24 56·81	+3·4103	+·0205	+ 58	+23 8 6·1	+16·168	−·301	− 27	5, 5	20·87, 20·87	2974
258	Gr. 518	7·0	25 16·66	+3·7092	+·0352	− 6	+38 48 12·5	+16·151	−·327	− 15	3, 5	20·60, 20·33	2980
259	BD + 33°, 445	6·5	25 45·45	+3·5982	+·0292	+ 56	+33 30 5·1	+16·126	−·318	− 57	5, 5	21·30, 21·30	2991
260	Pi 2h, 96	6·1	26 13·13	+3·4423	+·0217	+ 52	+24 54 13·3	+16·102	−·307	− 83	1, 2	11·78, 11·78	565
261	26 Arie.	6·4	2 26 25·74	+3·3554	+·0180	+ 50	+19 31 23·3	+16·091	−·298	− 33	3, 3	21·27, 21·27	566
262	14 Tria.	5·5	27 31·13	+3·6515	+·0316	+ 32	+35 48 56·3	+16·034	−·326	+ 5	5, 6	15·14, 15·14	571
263	BD + 33°, 454	5·9	28 20·57	+3·6207	+·0298	− 54	+34 12 44·4	+15·990	−·325	− 12	4, 5	20·67, 20·51	3048
264	29 Arie.	6·3	28 47·42	+3·2848	+·0151	− 11	+14 42 11·4	+15·967	−·296	+ 33	3, 3	20·90, 20·90	576
265	BD + 67°, 215	6·8	29 17·90	+5·0823	+·1432	+ 84	+68 2 23·3	+15·940	−·456	+ 13	6, 6	19·09, 19·09	3075
266	36 H Cass. S	5·3	2 30 51·803	+5·6642	+·2082	− 50*	+72 29 30·17	+15·857	−·512	+ 20*	22, 22	18·98, 18·98	577
267	BD + 65°, 280	6·1	31 27·11	+4·8659	+·1190	+ 80	+65 25 10·2	+15·825	−·442	− 7	4, 5	15·58, 14·81	3125
268	BD + 30°, 418	6·1	32 14·41	+3·5734	+·0269	− 32	+31 16 53·4	+15·783	−·328	− 3	5, 5	20·33, 20·33	3130
269	BD + 38°, 515	6·0	32 15·71	+3·7261	+·0345	+125	+38 24 40·1	+15·781	−·342	−192	5, 6	20·71, 20·28	3132
270	BD + 32°, 473	6·5	32 35·24	+3·5999	+·0281	+ 53	+32 33 52·6	+15·764	−·331	+ 63	5, 6	21·10, 21·04	3139
271	BD + 37°, 588	5·9	2 33 39·03	+3·7077	+·0332	− 33	+37 24 11·6	+15·706	−·343	− 43	5, 5	21·37, 21·37	3159
272	ν Arie. S	5·4	34 33·182	+3·4038	+·0193	− 6*	+21 38 16·80	+15·657	−·316	− 23*	9, 10	21·06, 20·13	597
273	δ Ceti F	4·1	35 38·165	+3·0729	+·0082	+ 7*	+ 0 0 20·88	+15·598	−·288	+ 1*	13, 36	20·13, 19·61	604
274	Br. 344	6·1	36 51·10	+8·4882	+·6770	+ 87	+81 8 0·1	+15·531	−·789	− 69	4, 4	12·00, 12·00	599
275	Gr. 540	6·1	37 41·68	+4·2075	+·0614	+ 79	+53 12 26·5	+15·484	−·396	− 28	6, 5	20·46, 20·76	3254
276	Gr. 543	6·9	2 37 59·29	+4·0150	+·0490	+ 7	+47 56 46·0	+15·468	−·379	+ 3	5, 5	20·78, 20·78	3258
277	Br. 366	6·1	38 20·84	+5·1294	+·1373	+ 37	+67 30 25·6	+15·448	−·483	− 28	2, 2	15·43, 15·43	613
278	θ Pers. S	4·2	39 4·002	+4·0531	+·0510	+343*	+48 54 44·67	+15·407	−·384	− 91*	9, 11	18·25, 17·08	617
279	14 Pers.	5·7	39 11·49	+3·8982	+·0419	0	+43 58 45·2	+15·400	−·370	− 4	2, 3	16·76, 17·86	619
280	μ Ceti F	4·3	40 53·098	+3·2218	+·0125	+190*	+ 9 47 54·28	+15·305	−·310	− 27*	17, 42	20·44, 19·75	629
281	BD + 35°, 553	6·6	2 42 19·81	+3·6968	+·0309	+ 42	+35 40 9·3	+15·223	−·357	− 4	4, 5	20·93, 20·73	3335
282	Gr. 556	6·2	43 57·84	+4·4109	+·0721	+ 8	+56 46 21·1	+15·130	−·428	− 7	5, 5	20·95, 20·95	3370
283	η Pers. S	4·0	45 12·705	+4·3603	+·0679	+ 29*	+55 35 7·56	+15·058	−·426	− 16*	9, 12	18·11, 17·98	639
284	41 Arie. S	3·5	45 33·843	+3·5221	+·0228	+ 50*	+26 57 8·33	+15·038	−·346	−113*	9, 10	18·29, 18·88	643
285	BD + 46°, 648	5·8	46 39·87	+4·0101	+·0458	− 28	+46 32 1·3	+14·974	−·395	− 24	6, 6	20·18, 20·16	3418
286	17 Pers.	4·8	2 46 53·21	+3·6898	+·0296	+ 16	+34 45 8·3	+14·961	−·364	− 74	2, 2	19·52, 19·52	646
287	BD + 47°, 723	7·2	48 13·94	+4·0763	+·0490	+ 15	+48 15 47·8	+14·883	−·404	− 26	5, 5	20·39, 20·39	3446
288	τ Pers. S	4·1	48 55·681	+4·2415	+·0585	+ 5*	+52 27 24·11	+14·842	−·422	− 6*	9, 8	18·06, 18·85	653
289	Pi 2h, 193	6·5	49 8·34	+4·1777	+·0545	− 61	+50 51 42·2	+14·829	−·416	− 27	4, 7	21·34, 21·32	3466
290	BD + 60°, 591	5·8	49 58·98	+4·7160	+·0905	+239	+61 12 58·0	+14·780	−·471	+ 27	2, 2	20·93, 20·93	655
291	BD + 63°, 369	6·5	2 50 12·02	+4·9278	+·1072	+ 14	+64 1 43·9	+14·767	−·492	+ 3	5, 5	21·50, 21·50	3497
292	Gr. 579	7·3	50 29·34	+4·0432	+·0464	+ 4	+47 0 2·0	+14·750	−·405	+ 4	5, 5	20·32, 20·32	3494
293	Gr. 585	5·8	51 28·80	+4·0430	+·0460	+ 4	+46 51 40·0	+14·691	−·407	+ 1	4, 5	21·20, 21·16	3520
294	Pi 2h, 206	6·5	51 34·53	+4·1945	+·0545	− 10	+50 57 33·0	+14·685	−·422	− 38	5, 4	18·28, 19·90	3525
295	η Erid. F	4·0	52 45·760	+2·9247	+·0052	+ 54*	− 9 11 44·80	+14·614	−·298	−215*	3, 15	20·23, 18·50	665
296	BD + 38°, 599	6·2	2 53 16·63	+3·7973	+·0333	− 5	+38 18 52·3	+14·583	−·386	− 15	6, 5	20·61, 20·52	3556
297	24 Pers.	5·1	54 24·47	+3·7154	+·0294	− 50	+34 53 0·6	+14·516	−·378	+ 12	4, 5	20·90, 20·71	670
298	Br. 414	7·0	54 34·91	+3·4327	+·0186	+ 41	+21 19 7·2	+14·504	−·353	− 15	3, 3	21·35, 21·35	673
299	Gr. 592	6·5	54 48·65	+3·8680	+·0362	+ 19	+40 44 7·4	+14·491	−·396	− 38	5, 5	19·96, 19·96	3587
300	ε Arie. S	4·6	54 55·118	+3·4282	+·0184	− 11*	+21 2 28·87	+14·484	−·352	− 8*	10, 12	21·94, 21·80	674

No.	STAR	M	1925·0 R.A.	1925·0 Prec.	1925·0 Sec. Var.	P.M. s ·0000	1925·0 Dec.	1925·0 Prec.	1925·0 Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
301	BD + 37° 675	5·9	2 55 26·42	+3·7919	+·0326	+ 6	+37 50 3·1	+14·453	−·389	− 27	5, 5	22·91, 22·71	3594
302	Pi 2h, 220	5·6	2 55 30·79	+4·2607	+·0568	+ 37	+52 3 17·0	+14·448	−·438	− 27	3, 3	21·86, 21·86	678
303	47H Ceph	5·9	2 56 2·56	+7·9053	+·4697	−131	+79 7 28·4	+14·416	−·807	+ 11	4, 3	14·77, 14·22	669
304	α Ceti F	2·7	2 58 21·397	+3·1350	+·0098	− 9*	+ 3 47 47·27	+14·275	−·327	− 77*	12, 26	20·02, 18·91	691
305	γ Pers S	3·0	2 59 21·126	+4·3329	+·0594	+ 4*	+53 12 50·23	+14·214	−·451	− 9*	10, 11	20·43, 20·57	694
306	χ Pers	5·1	2 59 53·42	+4·4949	+·0690	− 5	+56 24 45·4	+14·181	−·468	+ 71	3, 3	21·85, 21·85	697
307	BD + 55° 738	6·6	3 0 3·40	+4·4624	+·0669	+ 0	+55 46 40·7	+14·170	−·466	− 36	4, 4	22·20, 22·20	3681
308	ρ Pers S	3–4	3 0 21·797	+3·8270	+·0331	+115*	+38 33 2·59	+14·151	−·401	−108*	9, 10	20·65, 21·30	698
309	BD + 40° 664	6·5	3 0 29·52	+3·8756	+·0352	− 45	+40 17 27·2	+14·143	−·406	+ 2	3, 4	21·58, 21·69	3684
310	BD + 63° 390	6·0	3 1 1·32	+4·9989	+·1037	− 5	+63 46 3·6	+14·110	−·523	− 5	2, 2	22·96, 22·96	699
311	52 Arie	5·6	3 1 2·42	+3·5147	+·0208	+ 3	+24 57 51·8	+14·109	−·370	− 14	3, 3	22·30, 22·30	702
312	BD + 46° 692	7·0	3 2 38·63	+4·0984	+·0452	+ 5	+47 1 12·8	+14·009	−·433	− 7	4, 5	21·19, 20·94	3723
313	Gr. 611	5·8	3 2 40·10	+4·2929	+·0556	+ 36	+51 55 32·8	+14·008	−·454	− 25	5, 5	21·36, 21·36	3725
314	β Pers S	2–4	3 3 16·861	+3·8962	+·0355	+ 6*	+40 40 3·92	+13·969	−·413	− 5*	10, 9	20·20, 21·13	708
315	ι Pers S	4·2	3 3 38·627	+4·1898	+·0496	+1294*	+49 19 41·26	+13·947	−·445	− 84*	10, 10	21·68, 21·68	710
316	Pi 2h, 261	6·4	3 5 1·82	+3·4333	+·0177	+ 33	+20 28 31·8	+13·859	−·368	− 11	4, 5	20·75, 20·59	3760
317	Br. 444	6·0	3 5 59·51	+3·5584	+·0217	+ 4	+26 36 37·3	+13·798	−·382	+ 73	5, 5	20·96, 20·96	3783
318	Gr. 621	6·7	3 7 11·91	+3·9528	+·0370	+ 27	+42 5 37·9	+13·722	−·426	− 12	5, 5	20·75, 20·75	3810
319	BD + 47° 779	6·3	3 7 14·52	+4·1340	+·0455	+ 73	+47 26 44·0	+13·719	−·445	− 77	5, 5	20·51, 20·51	3812
320	δ Arie F	4·6	3 7 20·171	+3·4169	+·0170	+107*	+19 26 38·86	+13·713	−·369	− 6*	7, 13	20·53, 20·83	718
321	Pi 2h, 269	6·5	3 8 10·84	+4·1551	+·0463	+ 30	+47 53 47·0	+13·659	−·449	− 21	5, 5	20·76, 20·76	3830
322	94 Ceti	5·3	3 8 56·49	+3·0475	+·0078	+135	− 1 28 34·0	+13·610	−·332	− 55	1, 1	12·86, 12·86	722
323	Pi 3h, 5	6·7	3 9 57·57	+3·9668	+·0369	+ 65	+42 13 29·1	+13·545	−·432	+ 13	5, 5	20·15, 20·15	3864
324	Gr. 629	6·7	3 10 26·16	+4·2777	+·0517	+ 22	+50 40 42·8	+13·514	−·466	− 20	5, 5	20·61, 20·61	3876
325	48H Ceph S	5·7	3 10 44·516	+7·5159	+·3582	+203*	+77 27 41·37	+13·494	−·816	− 49*	20, 21	20·48, 20·78	721
326	Pi 3h, 9	5·7	3 10 46·11	+3·6497	+·0242	− 30	+30 16 42·1	+13·493	−·398	− 5	3, 3	15·38, 15·38	731
327	Gr. 631	5·3	3 10 49·88	+4·2789	+·0516	− 1	+50 39 38·5	+13·488	−·467	− 17	1, 1	19·00, 19·00	729
328	Gr. 633	7·0	3 10 58·27	+4·0643	+·0410	+ 51	+45 4 10·3	+13·479	−·444	− 43	5, 6	19·37, 19·14	3884
329	BD + 32° 591	6·5	3 11 8·56	+3·7052	+·0262	− 26	+32 34 43·9	+13·468	−·406	+ 9	4, 5	21·50, 21·19	3885
330	Pi 3h, 12	6·5	3 11 19·43	+3·7513	+·0278	+ 37	+34 24 43·9	+13·456	−·411	− 33	5, 5	21·47, 21·47	3888
331	BD + 31° 576	6·5	3 11 57·65	+3·6911	+·0255	− 12	+31 54 34·4	+13·415	−·406	−107	5, 4	20·17, 19·96	3904
332	30 Pers	5·5	3 12 44·05	+4·0262	−·0388	+ 25	+43 45 2·7	+13·365	−·444	− 27	2, 2	19·88, 19·88	740
333	29 Pers	5·3	3 13 16·66	+4·2601	+·0497	+ 34	+49 56 54·7	+13·329	−·470	− 30	2, 1	13·41, 15·01	742
334	Br. 448	4·8	3 13 22·07	+5·2514	+·1122	+ 18	+65 22 47·2	+13·323	−·578	− 5	2, 2	13·36, 13·36	741
335	Pi 3h, 23	5·0	3 14 1·98	+3·7467	+·0273	+ 4	+33 56 58·4	+13·280	−·415	− 12	3, 3	19·94, 19·94	746
336	Pi 3h, 32	4·6	3 15 47·79	+3·6263	+·0227	− 2	+28 46 40·3	+13·164	−·404	− 27	4, 4	20·48, 20·48	755
337	60 Arie	6·6	3 15 58·53	+3·5515	+·0202	+ 15	+25 23 37·7	+13·152	−·397	− 93	3, 3	20·87, 20·87	756
338	l Pers	5·0	3 16 24·62	+4·0168	+·0375	− 52	+43 3 34·8	+13·123	−·449	− 10	3, 3	20·20, 20·20	757
339	Pi 3h, 28	6·3	3 16 32·71	+4·2273	+·0469	+200	+48 48 9·8	+13·114	−·472	− 66	2, 2	20·43, 20·43	758
340	Br. 449	7·4	3 17 44·38	+6·3816	+·2066	+123	+72 56 35·1	+13·036	−·712	− 43	6, 6	20·38, 20·38	760
341	Pi 3h, 37	5·4	3 17 53·77	+4·2391	+·0470	+ 29	+48 56 46·1	+13·025	−·476	− 21	3, 3	19·33, 19·33	767
342	α Pers S	1·7	3 18 57·486	+4·2708	+·0481	+ 28*	+49 35 44·11	+12·954	−·481	− 28*	12, 11	17·43, 17·65	772
343	BD + 33° 636	5·9	3 19 47·91	+3·7440	+·0261	+ 29	+33 16 16·4	+12·897	−·424	− 24	1, 1	11·05, 11·05	774
344	Gr. 659	5·9	3 20 37·34	+4·2472	+·0464	+ 28	+48 51 27·0	+12·843	−·481	− 22	4, 5	20·02, 20·02	4075
345	o Taur F	3·6	3 20 46·467	+3·2311	+·0114	− 45*	+ 8 45 57·68	+12·833	−·367	− 78*	11, 26	20·53, 19·48	778
346	Pi 3h, 52	7·0	3 22 16·84	+4·2744	+·0471	+ 14	+49 20 20·8	+12·731	−·487	− 32	5, 5	20·37, 20·37	4101
347	Br. 459	6·8	3 22 30·87	+6·1792	+·1290	+ 32	+71 36 17·0	+12·715	−·702	− 10	12, 11	20·75, 20·64	4116
348	Br. 476	5·1	3 22 42·52	+4·2538	+·0460	+ 25	+48 48 9·4	+12·702	−·486	− 20	1, 1	11·78, 11·78	780
349	Pi 3h, 51 S	4·4	3 22 58·793	+4·8422	+·0770	+ 5*	+59 40 49·98	+12·684	−·552	− 1*	10, 9	20·64, 21·62	781
350	Pi 3h, 56	5·8	3 23 29·02	+4·2904	+·0474	+ 44	+49 35 22·3	+12·650	−·491	− 24	3, 3	19·87, 19·87	783

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			h m s	s	s		° ′ ″	″	″				
351	Pi 3h, 62	5·9	3 23 37·69	+3·7605	+·0259	+ 31	+33 32 56·1	+12·640	−·431	− 56	3, 5	17·65, 17·60	787
352	34 Pers	4·8	3 23 59·71	+4·2781	+·0466	+ 30	+49 15 2·1	+12·615	−·490	− 33	3, 3	20·71, 20·71	790
353	BD + 46° 760	7·0	3 24 11·81	+4·1749	+·0419	+ 18	+46 40 46·9	+12·601	−·479	− 35	5, 6	19·95, 19·96	4142
354	σ Pers	4·7	3 25 16·67	+4·2208	+·0436	+ 6	+47 44 16·0	+12·528	−·486	+ 22	5, 5	15·52, 15·52	795
355	Gr. 690	6·7	3 26 7·58	+4·2744	+·0457	− 4	+48 57 14·4	+12·469	−·493	+ 1	5, 5	20·56, 20·56	4177
356	Gr. 695	7·0	3 26 31·60	+3·9678	+·0329	+ 23	+40 30 19·1	+12·442	−·459	− 28	5, 5	20·91, 20·91	4189
357	5 Taur F	4·4	3 26 43·755	+3·3087	+·0129	+ 12*	+12 40 50·81	+12·428	−·384	− 4*	13, 30	19·45, 19·75	804
358	Br. 483	5·6	3 26 50·09	+4·2283	+·0432	+ 27	+47 46 9·0	+12·421	−·490	− 29	3, 2	20·99, 21·50	802
359	36 Pers	5·4	3 27 14·01	+4·1530	+·0401	− 48	+45 48 14·8	+12·393	−·482	− 69	2, 1	20·93, 20·77	805
360	BD + 57° 730	6·8	3 27 44·36	+4·7315	+·0678	− 17	+57 36 53·2	+12·359	−·548	− 1	5, 5	22·03, 22·03	4226
361	BD + 54° 693	5·7	3 27 55·72	+4·5609	+·0587	− 52	+54 43 18·4	+12·346	−·529	− 3	5, 5	21·66, 21·66	4229
362	Gr. 703	6·0	3 28 37·98	+3·9473	+·0315	− 8	+39 38 52·4	+12·298	−·459	− 44	5, 4	17·38, 18·77	809
363	ε Erid F	3·7	3 29 23·740	+2·8917	+·0054	−657*	− 9 42 40·26	+12·244	−·339	+ 15*	11, 23	20·48, 19·98	814
364	Br. 473	6·2	3 30 19·69	+7·1743	+·2637	− 28	+75 29 32·4	+12·180	−·836	+ 11	10, 9	20·47, 20·49	4290
365	ψ Pers	4·4	3 31 9·03	+4·2525	+·0430	+ 35	+47 56 40·4	+12·123	−·500	− 26	1, 1	11·78, 11·78	817
366	BD + 56° 826	6·6	3 32 25·27	+4·6989	+·0636	+ 30	+56 41 13·8	+12·034	−·553	− 30	7, 8	20·50, 20·45	4315
367	Gr. 716	5·5	3 35 37·80	+5·1898	+·0892	− 9	+62 58 31·5	+11·808	−·616	+ 21	4, 3	13·40, 13·93	826
368	Pi 3h, 104	5·7	3 36 14·51	+3·8982	+·0282	+ 19	+37 20 21·6	+11·765	−·465	− 22	5, 6	20·27, 20·25	833
369	11 Taur	6·2	3 36 17·25	+3·5794	+·0187	+ 11	+25 5 17·2	+11·762	−·427	− 15	4, 5	13·35, 13·08	836
370	δ Pers S	3·0	3 37 34·548	+4·2605	+·0412	+ 32*	+47 32 56·53	+11·670	−·510	−033*	12, 15	19·44, 18·68	838
371	40 Pers	5·1	3 37 37·03	+3·7982	+·0248	+ 8	+33 43 32·2	+11·668	−·455	− 11	2, 2	20·46, 20·46	839
372	BD + 48° 984	6·3	3 38 43·02	+4·2960	+·0423	− 2	+48 17 11·7	+11·589	−·516	− 10	5, 6	21·21, 21·21	4443
373	BD + 45° 804	6·1	3 39 24·92	+4·1989	+·0382	0	+45 51 50·3	+11·539	−·505	− 25	6, 6	21·35, 21·35	4459
374	o Pers	3·8	3 39 36·61	+3·7573	+·0232	+ 8	+32 3 7·0	+11·525	−·453	− 24	5, 3	12·91 13·65	844
375	δ Erid F	3·7	3 39 39·236	+2·8797	+·0054	− 62*	−10 0 58·50	+11·522	−·348	+743*	3, 3	20·24, 20·24	848
376	ν Pers S	3·9	3 40 5·472	+4·0706	+·0333	− 8*	+42 20 34·98	+11·491	−·491	+ 1*	12, 16	19·38, 19·50	847
377	17 Taur	3·8	3 40 25·11	+3·5580	+·0177	+ 14	+23 52 43·5	+11·467	−·430	− 50	1, 1	12·86, 12·86	852
378	Gr. 733	6·5	3 40 40·70	+3·9435	+·0288	− 34	+38 26 27·9	+11·449	−·477	+ 18	5, 5	22·19, 22·19	4489
379	18 Taur	6·0	3 40 40·99	+3·5751	+·0181	+ 12	+24 36 19·3	+11·448	−·433	− 55	3, 3	21·57, 21·57	855
380	Gr. 731	5·8	3 40 44·00	+4·1872	+·0373	+ 31	+45 26 52·7	+11·445	−·507	− 15	4, 4	22·02, 22·02	853
381	21 Taur	6·1	3 41 26·13	+3·5696	+·0179	+ 12	+24 19 17·2	+11·394	−·433	− 41	4, 4	21·54, 21·54	861
382	BD + 55° 824	6·3	3 41 38·88	+4·6848	+·0582	+ 40	+55 41 24·5	+11·379	−·567	− 14	5, 5	21·65, 21·65	4518
383	γ Caml S	4·7	3 42 24·726	+6·2940	+·1592	+ 60*	+71 6 11·69	+11·324	−·762	− 36*	22, 22	21·30, 20·97	858
384	Gr. 642 P	6·0	3 42 25·197	+20·6622	+3·3502	+·1666*	+86 24 46·30	+11·323	−2·491	− 71*	80, 64	20·07, 20·03	830
385	BD + 50° 825	5·7	3 42 45·96	+4·4121	+·0455	+ 19	+50 30 20·6	+11·298	−·536	− 5	4, 5	21·20, 21·58	4544
386	24 Taur	7·4	3 42 53·30	+3·5618	+·0175	+ 14	+23 53 4·8	+11·290	−·434	− 54	1, 1	19·81, 19·81	867
387	η Taur S	2·9	3 43 1·322	+3·5617	+·0175	+ 14*	+23 52 28·24	+11·280	−·434	− 48*	12, 12	20·33, 20·26	869
388	BD + 31° 650	6·5	3 43 6·33	+3·7623	+·0228	− 22	+31 57 53·8	+11·274	−·458	− 47	4, 4	22·67, 22·67	4546
389	BD + 56° 846	6·5	3 43 20·15	+4·7682	+·0613	+ 26	+56 53 20·5	+11·257	−·580	− 25	4, 3	22·47, 22·94	4562
390	Gr. 740	6·0	3 43 57·24	+4·1325	+·0344	+ 4	+43 43 59·2	+11·212	−·504	+ 22	5, 5	21·58, 21·58	4572
391	BD + 68° 286	6·3	3 44 18·85	+5·8565	+·1243	+ 38	+68 16 50·1	+11·186	−·713	− 11	6, 8	22·41, 22·34	4604
392	η Pers	5·3	3 44 47·92	+3·7901	+·0233	− 32	+32 51 45·7	+11·151	−·463	− 13	5, 4	14·97, 15·77	878
393	Gr. 743	5·9	3 44 50·69	+4·1733	+·0356	− 15	+44 44 24·9	+11·148	−·510	− 33	3, 3	20·26, 20·26	876
394	Pi 3h, 163	7·2	3 45 16·26	+3·5559	+·0171	+ 13	+23 29 4·9	+11·116	−·436	− 48	6, 7	21·56, 21·62	4603
395	Pi 3h, 166	5·9	3 45 30·27	+3·5228	+·0163	+ 13	+22 1 3·1	+11·100	−·432	− 37	4, 6	21·49, 21·17	4610
396	Pi, 3h, 170	5·5	3 45 48·15	+3·6006	+·0182	+ 29	+25 21 16·3	+11·078	−·442	−108	3, 3	21·05, 21·05	883
397	BD + 33° 728	6·0	3 47 5·72	+3·8306	+·0241	+ 9	+34 8 2·7	+10·983	−·472	0	2, 3	12·90, 12·61	886
398	BD + 30° 585	6·5	3 47 23·14	+3·7436	+·0216	− 17	+30 56 41·1	+10·962	−·462	− 45	5, 5	20·76, 20·76	4654
399	ζ Pers S	2·8	3 49 24·782	+3·7667	+·0219	+ 10*	+31 39 44·12	+10·813	−·467	− 17*	15, 17	17·20, 17·34	894
400	Pi 3h, 186	5·5	3 50 33·56	+4·3113	+·0389	+ 31	+47 39 9·7	+10·728	−·537	− 24	2, 2	20·79, 20·79	898

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			h m s	s	s	s	° ′ ″	″	″	″			
401	χ Cygn.	6–7	3 50 41·50	+3·7466	+·0212	− 7	+30 49 34·8	+10·719	−·466	− 7	5, 5	20·59, 20·59	4720
402	Pi 3h, 194	5·6	3 51 38·40	+3·8615	+·0241	− 14	+34 51 46·6	+10·649	−·481	− 10	4, 4	20·67, 20·67	904
403	33 Taur.	6·3	3 52 36·74	+3·5537	+·0162	+ 21	+22 57 31·9	+10·577	−·445	− 13	2, 2	21·50, 21·50	909
404	ε Pers. S	2·9	3 52 48·877	+4·0189	+·0284	+ 23*	+39 47 40·88	+10·562	−·502	− 29*	11, 13	17·12, 16·24	910
405	BD + 24° 599	6·6	3 52 57·12	+3·5845	+·0169	+ 3	+24 14 44·3	+10·551	−·449	− 11	5, 6	20·82, 20·68	4757
406	Gr. 767	6·5	3 53 29·45	+3·9820	+·0271	+ 36	+38 37 34·1	+10·511	−·499	− 41	7, 7	17·29, 17·70	4770
407	ξ Pers. S	4·1	3 54 5·598	+3·8881	+·0244	+ 11*	+35 34 36·34	+10·466	−·488	− 12*	13, 13	19·00, 19·96	913
408	γ Erid. F	3·1	3 54 31·751	+2·7942	+·0046	+ 46*	−13 43 15·22	+10·434	−·352	−112*	9, 21	19·38, 20·88	915
409	Gr. 769	6·8	3 54 40·42	+3·9842	+·0270	− 2	+38 36 26·7	+10·423	−·501	0	5, 5	20·01, 20·01	4784
410	λ Taur. F	Var.	3 56 31·349	+3·3224	+·0114	− 4*	+12 16 46·71	+10·285	−·420	− 14*	11, 30	19·43, 19·96	920
411	Pi 3h, 208	5·2	3 58 11·35	+4·9862	+·0632	+ 1	+58 56 55·7	+10·159	−·631	+ 7	2, 2	16·46, 16·56	924
412	BD + 68° 303	6·1	3 58 30·07	+5·9957	+·1174	+ 24	+68 28 28·7	+10·136	−·758	+ 12	5, 5	21·40, 21·40	4874
413	ν Taur. F	4·0	3 59 9·867	+3·1897	+·0091	+ 1*	+ 5 46 56·64	+10·086	−·406	− 7*	16, 33	20·12, 20·28	932
414	Gr. 773	6·1	3 59 36·83	+5·5885	+·0924	+ 56	+65 19 2·9	+10·052	−·709	− 16	5, 5	21·42, 21·42	4903
415	37 Taur.	4·5	4 0 15·40	+3·5378	+·0151	+ 67	+21 52 42·1	+10·003	−·451	− 64	1, 2	12·86, 12·32	936
416	BD + 17° 676	6·8	4 0 21·87	+3·4339	+·0131	− 19	+17 18 45·1	+ 9·995	−·438	+ 12	6, 6	20·55, 20·55	4900
417	BD + 53° 732	6·5	4 0 45·43	+4·6575	+·0480	+ 68	+53 48 28·2	+ 9·965	−·593	− 98	5, 5	21·86, 21·86	4922
418	ψ Taur.	5·3	4 2 22·06	+3·7128	+·0186	− 62	+28 47 59·5	+ 9·843	−·476	+ 3	3, 2	13·19, 13·88	944
419	Gr. 778	5·8	4 3 5·62	+5·0692	+·0639	+ 6	+59 42 33·8	+ 9·787	−·649	− 3	5, 4	20·62, 20·50	4972
420	c Pers. S	4·0	4 3 12·542	+4·3465	+·0360	+ 32*	+47 30 49·91	+ 9·778	−·557	− 30*	12, 14	18·90, 17·91	947
421	BD + 54° 740	6·5	4 3 26·40	+4·7171	+·0491	+100	+54 37 56·1	+ 9·761	−·605	− 92	5, 6	20·94, 20·77	4977
422	Pi 3h, 254	6·3	4 4 50·11	+3·3475	+·0112	+ 10	+13 12 2·5	+ 9·654	−·432	− 25	2, 2	20·44, 20·44	953
423	BD + 71° 239	6·2	4 5 20·38	+6·6674	+·1524	+ 38	+71 56 0·2	+ 9·615	−·857	− 22	10, 10	19·92, 19·92	5029
424	BD + 68° 310	6·4	4 5 17·68	+6,0200	+·1112	− 74	+68 18 24·0	+ 9·619	−·774	+ 30	5, 7	21·13, 21·25	5022
425	Pi 3h, 255	6·0	4 6 9·89	+3·8473	+·0211	+ 2	+33 23 31·1	+ 9·552	−·497	− 16	4, 5	20·81, 20·62	5018
426	o^1 Erid. F	4·2	4 8 12·187	+2·9272	+·0057	+ 6*	− 7 1 55·56	+ 9·395	−·381	+ 81*	6, 10	20·77, 21·90	963
427	Pi 4h, 6	6·2	4 8 24·24	+3·5553	+·0145	− 1	+22 13 19·1	+ 9·380	−·462	− 10	5, 5	20·76, 20·71	5066
428	BD + 57° 785	6·0	4 8 51·85	+4·9122	+·0540	+ 3	+57 16 14·8	+ 9·344	−·638	− 10	6, 7	21·38, 21·34	5091
429	BD + 66° 316	6·9	4 10 28·67	+5·8554	+·0965	+ 60	+66 54 11·8	+ 9·218	−·762	− 11	5, 6	21·86, 21·74	5136
430	Pi 4h, 7	5·3	4 10 51·55	+4·6734	+·0441	− 1	+53 25 30·8	+ 9·189	−·610	− 4	3, 3	19·94, 19·94	974
431	Gr. 750 P	6·8	4 12 24·132	+17·7448	+1·7558	+160*	+85 21 23·13	+ 9·069	−2·311	+ 32*	137, 110	17·55, 17·35	958
432	Gr. 804	6·4	4 12 56·20	+4·1455	+·0272	+ 30	+41 57 29·5	+ 9·027	−·543	− 34	5, 5	20·59, 20·59	5177
433	Gr. 803	5·7	4 13 34·94	+4·4901	+·0369	+ 71	+49 52 3·4	+ 8·977	−·588	− 51	3, 4	22·38, 22·07	990
434	Pi 4h, 10	5·6	4 13 36·08	+5·6304	+·0822	− 34	+64 57 33·6	+ 8·975	−·737	0	2, 2	19·96, 19·96	988
435	b^2 Pers.	5·6	4 14 30·13	+4·5377	+·0382	+ 15	+50 44 25·3	+ 8·904	−·597	+ 3	4, 5	22·36, 22·31	992
436	Pi 4h, 31	6·6	4 15 3·18	+4·1381	+·0264	+ 13	+41 37 42·4	+ 8·861	−·545	− 26	5, 5	21·89, 21·89	5220
437	56 Taur.	5·6	4 15 10·10	+3·5473	+·0136	+ 26	+21 35 37·1	+ 8·852	−·468	− 46	2, 2	21·62, 21·62	998
438	BD + 31 757	6·3	4 15 23·24	+3·8158	+·0188	+ 5	+31 46 24·4	+ 8·835	−·503	+ 10	5, 5	21·84, 21·84	5227
439	γ Taur. F	3·8	4 15 31·382	+3·4044	+·0113	+ 81*	+15 26 51·42	+ 8·824	−·449	− 27*	5, 7	20·38, 19·59	1000
440	54 Pers.	5·2	4 15 32·18	+3·8939	+·0204	− 25	+34 23 13·4	+ 8·823	−·513	− 15	5, 5	11·23, 11·41	999
441	B.A.C. 1318	5·9	4 15 44·92	+4·8747	+·0490	− 13	+56 19 39·7	+ 8·807	−·642	+ 15	5, 6	22·06, 21·91	5253
442	d Pers.	4·9	4 16 7·31	+4·3309	+·0313	+ 23	+46 19 16·7	+ 8·777	−·572	− 38	2, 2	13·39, 13·39	1003
443	BD + 59° 793	6·0	4 16 32·74	+5·1093	+·0574	+ 46	+59 26 25·3	+ 8·744	−·674	− 36	5, 6	21·03, 21·05	5276
444	Pi 4h, 53	6·3	4 17 57·87	+3·5273	+·0130	+ 7	+20 38 43·1	+ 8·632	−·468	− 5	4, 4	21·28, 21·28	1014
445	Pi 4h, 46	6·5	4 18 22·23	+4·1694	+·0264	+ 25	+42 15 14·0	+ 8·600	−·553	− 32	5, 6	21·04, 21·05	5305
446	δ Taur. F	4·0	4 18 36·398	+3·4505	+·0117	+ 77*	+17 22 4·30	+ 8·582	−·458	− 33*	15, 25	20·33, 20·08	1017
447	BD + 20° 751	5·9	4 19 7·02	+3·5322	+·0130	+ 14	+20 48 30·7	+ 8·541	−·469	− 29	4, 5	21·04, 21·06	5317
448	56 Pers.	6·1	4 19 45·44	+3·8829	+·0195	+ 35	+33 47 18·3	+ 8·490	−·517	− 82	3, 3	21·01, 21·01	1021
449	64 Taur.	5·0	4 19 46·04	+3·4492	+·0115	+ 82	+17 16 17·0	+ 8·489	−·459	− 41	1, 1	11·78, 11·78	1022
450	BD + 57° 800	6·3	4 20 46·61	+4·9707	+·0498	+ 18	+57 24 56·0	+ 8·410	−·661	− 18	5, 5	20·99, 20·99	5358

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			h m s	s	s		° ′ ″	″	″				
451	κ^2 Taur	5·5	4 20 56·68	+3·5638	+·0133	+ 84	+22 1 47·7	+ 8·396	−·475	− 60	3, 3	20·26, 20·25	1027
452	68 Taur	4·4	4 21 8·72	+3·4616	+·0116	+ 75	+17 45 27·9	+ 8·380	−·462	− 25	1, 1	11·77, 11·77	1029
453	Pi 4h, 69	5·4	4 21 19·54	+3·8103	+·0177	+ 64	+31 16 17·0	+ 8·366	−·508	−120	2, 2	11·06, 11·06	1030
454	70 Taur	6·8	4 21 20·26	+3·4157	+·0109	+ 77	+15 46 15·1	+ 8·365	−·456	− 29	3, 4	21·44, 21·10	1031
455	69 Taur	4·4	4 21 48·99	+3·5799	+·0134	+ 81	+22 38 42·9	+ 8·328	−·478	− 52	1, 1	12·86, 12·86	1033
456	71 Taur	4·7	4 22 4·16	+3·4089	+·0108	+ 79	+15 26 57·4	+ 8·307	−·456	− 27	3, 3	21·02, 21·02	1034
457	BD + 30° 665	6·2	4 24 7·63	+3·7834	+·0167	+ 11	+30 11 47·0	+ 8·143	−·507	− 23	5, 5	20·84, 20·84	5431
458	ϵ Taur F	3·6	4 24 14·060	+3·4937	+·0118	+ 80*	+19 0 55·52	+ 8·134	−·469	− 38*	9, 21	20·33, 19·86	1044
459	Gr. 828	6·0	4 24 47·29	+6·9199	+·1379	+ 77	+72 22 9·8	+ 8·090	−·926	− 79	10, 14	20·74, 20·83	5478
460	Pi 4h, 67	6·9	4 25 32·60	+6·0245	+·0896	+ 28	+67 28 15·8	+ 8·029	−·808	− 6	5, 7	21·21, 21·33	5492
461	BD + 32° 806	6·5	4 25 49·30	+3·8471	+·0176	+ 0	+32 17 43·5	+ 8·007	−·518	− 12	6, 6	19·41, 21·08	5472
462	1 Caml	6·0	4 26 4·93	+4·7444	+·0398	+ 7	+53 44 57·3	+ 7·986	−·638	− 5	1, 3	15·07, 13·05	1050
463	Br. 616	7·0	4 28 4·63	+4·2150	+·0250	+ 17	+42 52 28·6	+ 7·826	−·570	− 73	3, 4	20·66, 20·61	1060
464	m Pers	6·4	4 28 7·95	+4·2164	+·0249	+ 6	+42 54 18·8	+ 7·821	−·569	+ 1	2, 2	20·50, 20·50	1061
465	Pi 4h, 111	6·0	4 29 56·19	+3·7516	+·0152	+ 4	+28 48 20·3	+ 7·676	−·509	− 22	3, 3	21·05, 21·05	1068
466	α Taur F	0·9	4 31 36·883	+3·4363	+·0103	+ 48*	+16 21 34·89	+ 7·540	−·467	−191*	10, 33	21·26, 19·57	1077
467	BD + 23° 715	6·0	4 31 57·93	+3·6035	+·0126	+ 84	+23 11 22·0	+ 7·512	−·490	− 55	5, 4	20·42, 19·74	5611
468	3 Caml	5·4	4 33 59·86	+4·7187	+·0356	+ 12	+52 55 54·4	+ 7·347	−·643	− 18	3, 2	21·05, 21·02	1082
469	BD + 24° 674	6·8	4 34 48·54	+3·6552	+·0130	+ 16	+25 4 14·6	+ 7·281	−·500	− 4	6, 6	20·02, 20·02	5663
470	Gr. 860	5·9	4 35 48·04	+4·4656	+·0284	+ 40	+48 9 24·1	+ 7·199	−·610	− 34	4, 4	20·00, 20·00	1093
471	BD + 37° 954	6·3	4 36 44·00	+4·0536	+·0194	+204	+38 8 18·2	+ 7·124	−·555	− 98	6, 5	17·58, 18·88	5701
472	59 Pers	5·4	4 37 34·69	+4·2484	+·0231	+ 41	+43 13 26·0	+ 7·054	−·583	+ 50	4, 3	12·35, 12·73	1103
473	Gr. 866	6·0	4 37 39·19	+4·5548	+·0299	+ 4	+49 49 55·5	+ 7·048	−·625	− 27	2, 2	19·98, 19·98	1102
474	τ Taur S	4·3	4 37 44·465	+3·5991	+·0118	+ 4*	+22 48 51·86	+ 7·041	−·494	− 22*	11, 12	20·36, 21·43	1107
475	95 Taur	6·4	4 38 41·19	+3·6293	+·0121	+ 10	+23 56 53·5	+ 6·963	−·500	− 28	2, 2	20·47, 20·47	1109
476	Pi 4h, 112 S	6·1	4 38 42·618	+8·0280	+·1773	+114*	+75 48 27·51	+ 6·962	−1·101	−131*	24, 29	19·07, 19·07	1100
477	BD + 40° 1032	5·9	4 39 1·17	+4·1492	+·0207	+ 6	+40 38 49·4	+ 6·936	−·570	− 8	5, 5	19·00, 19·00	5752
478	Br. 654	7·3	4 41 10·60	+3·6196	+·0117	+ 8	+23 29 29·5	+ 6·759	−·500	− 16	6, 6	20·70, 20·67	5791
479	BD + 40° 1045	6·9	4 41 33·69	+4·1357	+·0198	+ 3	+40 10 39·7	+ 6·727	−·571	− 30	5, 6	21·30, 21·27	5803
480	4 Caml S	5·4	4 41 44·896	+4·9843	+·0392	+ 64*	+56 37 33·19	+ 6·712	−·687	−148*	10, 10	18·32, 18·32	1117
481	μ Erid F	4·2	4 41 45·072	+2·9983	+·0054	+ 13*	− 3 23 27·45	+ 6·712	−·415	− 10*	8, 22	20·44, 19·68	1123
482	BD + 31° 816	5·9	4 44 24·17	+3·8417	+·0144	+ 17	+31 18 31·1	+ 6·493	−·533	−113	2 ,2	11·06, 11·06	1129
483	Pi 4h, 185	6·0	4 44 27·75	+3·8770	+·0149	+ 18	+32 27 29·0	+ 6·488	−·538	− 33	5, 6	20·02, 19·69	5856
484	1 Auri	5·2	4 44 51·53	+4·0386	+·0174	− 29	+37 21 26·0	+ 6·455	−·559	+ 29	5, 3	12·96, 13·96	1133
485	Pi 4h, 170	5·9	4 45 3·41	+5·5977	+·0553	+ 83	+63 22 46·0	+ 6·438	−·776	− 96	3, 2	18·74, 17·58	1128
486	Pi 4h, 184	6·0	4 45 30·66	+4·5099	+·0262	+ 31	+48 36 47·0	+ 6·401	−·624	− 52	5, 5	20·63, 20·63	1134
487	α Caml S	4·3	4 46 34·871	+5·9508	+·0658	+ 12*	+66 13 3·04	+ 6·312	−·826	+ 5*	14, 16	18·76, 18·61	1139
488	Br. 661	7·2	4 47 18·70	+4·0129	+·0164	+ 55	+36 31 1·1	+ 6·251	−·558	− 36	3, 3	20·12, 20·12	1144
489	2 Auri	5·0	4 47 36·56	+4·0153	+·0163	− 11	+36 34 40·4	+ 6·226	−·559	− 22	3, 1	11·35, 11·14	1148
490	Pi 4h, 211	5·9	4 48 5·87	+3·7422	+·0124	+ 39	+27 46 24·4	+ 6·186	−·522	− 32	7, 7	20·92, 20·92	5940
491	4 Orio	5·1	4 48 17·29	+3·3928	+·0083	0	+14 7 37·0	+ 6·170	−·473	− 59	3, 3	21·36, 21·36	1149
492	5 Orio	5·8	4 49 27·94	+3·1259	+·0059	+ 19	+ 2 23 7·8	+ 6·072	−·437	− 20	1, 1	15·07, 15·07	1154
493	Gr. 894	6·1	4 49 27·98	+4·3000	+·0208	+ 29	+43 56 25·0	+ 6·072	−·600	− 55	6, 4	21·25, 20·58	5969
494	π^5 Orio F	3·8	4 50 20·578	+3·1244	+·0060	− 2*	+ 2 19 9·0	+ 5·999	−·437	− 3*	16, 29	20·53, 19·37	1159
495	BD + 35° 930	6·9	4 51 19·51	+4·0022	+·0154	− 12	+36 2 59·2	+ 5·917	−·560	+ 11	5, 4	18·63, 20·51	6011
496	ι Auri S	2·8	4 52 6·398	+3·9044	+·0139	+ 7*	+33 2 55·42	+ 5·852	−·546	− 27*	9, 8	15·59, 16·08	1167
497	Br. 686	5·9	4 53 2·32	+3·4650	+·0086	+ 5	+17 2 13·9	+ 5·774	−·486	− 19	2, 2	21·10, 21·10	1174
498	99 Taur	6·1	4 53 15·50	+3·6383	+·0104	+ 4	+23 49 58·6	+ 5,755	−·510	− 25	3, 3	20·01, 20·01	1175
499	ω Auri	5·1	4 54 9·72	+4·0661	+·0158	+ 42	+37 46 42·8	+ 5·679	−·571	−104	2, 3	21·58, 21·11	1178
500	BD + 60° 853	6·7	4 54 50·86	+5·3843	+·0422	+ 21	+60 58 14·1	+ 5·622	−·756	−174	6, 7	21·94, 21·83	6088

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			h m s	s	s		° ′ ″	″	″				
501	Pi 4h, 204	6·8	4 54 50·93	+7·4468	+·1134	+ 62	+73 39 19·3	+ 5,622	−1·044	− 14	8, 10	21·08, 21·13	6111
502	Pi 4h, 207	6·0	55 11·14	+7·5360	+·1167	+ 44	+73 57 32·7	+ 5·595	−1·057	− 15	11, 10	20·36, 21·14	6121
503	ε Auri S	3·4	56 34·974	+4·3018	+·0188	+ 5*	+43 42 50·25	+ 5·476	− ·605	− 13*	10, 10	19·22, 19·22	1187
504	β Caml S	4·2	56 44·290	+5·3301	+·0396	+ 3*	+60 20 4·54	+ 5,463	− ·750	− 13*	10, 11	21·58, 21·54	1185
505	Gr. 915	6·8	58 2·75	+4·2055	+·0169	+ 5	+41 20 5·5	+ 5·353	− ·593	− 5	5, 5	20·72, 20·72	6153
506	Gr. 904	6·8	4 58 3·91	+6·4047	+·0691	+ 6	+68 52 6·9	+ 5·351	− ·902	− 15	5, 5	21·67, 21·67	6173
507	ι Tauri S	4·8	58 36·628	+3·5800	+·0091	+ 48*	+21 29 3·11	+ 5·305	− ·506	− 47*	12, 13	21·55, 21·68	1194
508	BD + 60° 857	6·3	59 42·58	+5,4073	+·0395	+ 59	+61 4 8·0	+ 5·212	− ·763	− 73	5, 5	20·64, 20·64	6202
509	Pi 4h, 282	6·6	59 53·31	+3·5727	+·0089	+ 17	+21 10 26·7	+ 5·197	− ·505	− 16	6, 5	21·28, 21·12	6183
510	η Auri S	3·2	5 1 15·108	+4·2018	+·0160	+ 27*	+41 8 4·48	+ 5·082	− ·595	− 75*	15, 14	17·15, 17·54	1204
511	Pi 4h, 284	7·0	1 27·99	+4·2817	+·0172	+ 8	+43 4 26·3	+ 5·064	− ·606	− 1	5, 5	20·21, 20·21	6230
512	l Tauri	5·4	3 21·96	+3·5526	+·0083	− 30	+20 19 15·4	+ 4·903	− ·504	− 50	3, 3	21·05, 21·05	1214
513	103 Tauri	5·7	3 32·29	+3·6543	+·0092	+ 2	+24 10 1·5	+ 4·888	− ·519	− 11	3, 3	20·78, 20·78	1216
514	β Erid F	2·8	4 9·699	+2·9552	+·0044	− 59*	− 5 10 55·95	+ 4·836	− ·420	− 79*	11, 32	20·59, 20·04	1220
515	107 Tauri	6·8	4 24·80	+3·5389	+·0080	+ 3	+19 45 49·9	+ 4·814	− ·503	− 18	2, 2	21·58, 21·58	1221
516	BD + 27° 732	6·0	5 5 2·39	+3·7612	+·0100	+ 47	+27 56 12·6	+ 4·761	− ·535	− 70	5, 5	20·37, 20·37	6301
517	BD + 61° 766	6·2	6 9·99	+5·4924	+·0371	+ 23	+61 45 31·8	+ 4·665	− ·781	+ 7	7, 6	21·11, 21·27	6345
518	Pi 5h, 1	5·4	7 23·02	+3·4448	+·0070	+ 2	+15 57 15·8	+ 4·561	− ·491	+ 2	3, 4	20·75, 18·57	1234
519	μ Auri	4·9	8 17·61	+4·1050	+·0131	− 15	+38 23 50·1	+ 4·484	− ·585	− 74	9, 9	11·97, 12·41	1236
520	BD + 59° 857	6·6	8 35·18	+5·2687	+·0309	+ 22	+59 19 8·3	+ 4·459	− ·751	− 14	5, 5	20·21, 20·21	6385
521	Pi 4h, 315	6·2	5 8 42·92	+4·8099	+·0228	+ 19	+53 7 35·9	+ 4·448	− ·686	0	7, 6	21·05, 21·21	6383
522	19H Caml S	5·2	10 9·836	+9·8810	+·1842	−275*	+79 8 55·40	+ 4·324	−1·408	+156*	25, 26	18·98, 19·04	1235
523	14 Auri	5·2	10 31·21	+3·9077	+·0105	− 10	+32 36 8·0	+ 4·294	− ·558	+ 9	3, 4	16·76, 15·60	1244
524	12 Auri	7·2	10 53·62	+4·4407	+·0166	+ 9	+46 19 56·3	+ 4·262	− ·635	− 8	3, 3	19·92, 19·92	1245
525	β Orio F	0·0	10 55·983	+2·8826	+·0038	+ 1*	− 8 17 13·73	+ 4·259	− ·412	− 1*	5, 13	21·06, 19·23	1250
526	α Auri S	0·0	5 11 8·721	+4·4217	+·0162	+ 81*	+45 55 24·31	+ 4·241	− ·632	−429*	11, 10	20·46, 21·40	1246
527	BD + 34° 980	6·0	11 20·74	+3·9615	+·0110	+ 4	+34 13 39·8	+ 4·224	− ·566	+ 29	2, 2	21·63, 21·63	1249
528	15 Caml	6·4	12 59·44	+5·1697	+·0265	+ 28	+58 2 19·1	+ 4·082	− ·740	− 27	3, 3	21·39, 21·39	1253
529	16 Auri	4·7	13 15·14	+3·9323	+·0103	+ 55	+33 17 43·2	+ 4·060	− ·563	−176	2, 2	11·06, 11·06	1258
530	BD + 62° 742	6·0	13 22·15	+5·5950	+·0341	+ 37	+62 34 31·9	+ 4·050	− ·801	− 21	4, 3	16·54, 17·05	1255
531	17 Auri	6·5	5 13 22·61	+3·9453	+·0104	+ 13	+33 41 16·8	+ 4·050	− ·565	− 33	5, 6	21·30, 21·42	6476
532	Br. 728	6·7	13 26·00	+4·1862	+·0128	+ 18	+40 23 8·5	+ 4·045	− ·599	− 17	5, 5	19·33, 19·33	6481
533	τ Orio F	3·7	13 57·835	+2·9138	+·0038	− 11*	− 6 55 26·87	+ 3·999	− ·418	− 7*	6, 18	21·04, 18·76	1262
534	Gr. 955	7·0	14 35·39	+4·3535	+·0144	+ 7	+44 20 54·7	+ 3·946	− ·624	− 12	5, 5	20·88, 20·88	6508
535	Pi 5h, 42	5·8	16 26·35	+3·8151	+·0086	+ 2	+29 29 43·2	+ 3·787	− ·548	+ 1	6, 6	21·08, 21·08	1275
536	ρ Auri	5·3	5 16 29·72	+4·2433	+·0126	+ 23	+41 43 52·8	+ 3·782	− ·609	− 37	2, 4	14·52, 13·72	1274
537	BD + 40° 1[illegible]	5·7	17 34·19	+4·2129	+·0121	− 3	+40 57 24·2	+ 3·690	− ·605	+ 2	1, 1	11·17, 11·17	1280
538	σ Auri	5·3	19 33·15	+4·0756	+·0103	− 1	+37 19 0·5	+ 3 519	− ·586	− 27	2, 3	13·08, 14·07	1292
539	Pi 5h, 62	6·4	19 48·24	+3·8683	+·0085	− 30	+31 9 20·4	+ 3·498	− ·557	− 11	5, 6	19·97, 20·15	6642
540	Pi 5h, 63	6·1	19 48·36	+3·8658	+·0085	− 9	+31 4 29·3	+ 3·497	− ·556	− 9	6, 4	20·57, 20·32	1293
541	γ Orio F	1·6	5 21 6·460	+3·2178	+·0046	− 5*	+ 6 16 59·04	+ 3·385	− ·464	− 19*	6, 28	20·78, 19·31	1303
542	β Taur S	1·6	21 32·984	+3·7895	+·0077	+ 24*	+28 32 43·50	+ 3·347	− ·546	−177*	11, 10	17·57, 18·22	1304
543	Br. 755	6·6	21 50·57	+3·9727	+·0090	+ 9	+34 19 37·9	+ 3·322	− ·573	− 14	5, 7	21·32, 21·39	6689
544	BD + 35° 1102	6	21 53·47	+4·0091	+·0092	− 13	+35 23 24·4	+ 3·318	− ·578	− 11	5, 5	19·32, 19·32	6691
545	BD + 33° 1045	5	21 55·83	+3·9351	+·0086	+ 14	+33 11 52·7	+ 3·314	− ·567	− 3	5, 6	21·33, 21·47	6693
546	BD + 30° 898	5·9	5 22 20·22	+3·8384	+·0078	0	+30 8 40·8	+ 3·280	− ·553	− 19	1, 1	11·06, 11·06	1310
547	115 Taur	5·6	22 47·46	+3·4987	+·0057	+ 6	+17 53 57·0	+ 3·240	− ·505	− 14	3, 3	21·10, 21·10	1313
548	Pi 5h, 99	7·0	24 54·64	+3·8087	+·0072	+ 20	+29 7 41·5	+ 3·057	− ·550	− 56	8, 8	20·28, 20·28	6772
549	BD + 41° 1206	7·0	25 30·49	+4·2378	+·0102	− 14	+41 24 17·7	+ 3·005	− ·612	− 42	7, 7	19·01, 17·75	6797
550	χ Auri	4·9	27 50·66	+3·9041	+·0074	+ 5	+32 8 16·2	+ 2·803	− ·565	− 16	4, 3	11·08, 13·33	1333

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			h m s	s	s		° ′ ″	″	″				
551	Bruss. 2152	6·8	5 27 53·27	+3·4774	+·0051	− 4	+17 0 5·6	+ 2·799	− ·503	+ 7	2, 1	21·07, 22·06	1337
552	δ Orio F	2·2	28 10·455	+3·0646	+·0036	+ 1*	− 0 21 12·09	+ 2·775	− ·444	− 3*	7, 25	21·51, 18·65	1339
553	120 Taur	5·8	29 7·72	+3·5156	+·0051	+ 7	+18 29 17·0	+ 2·692	− ·510	− 6	2, 2	21·15, 21·15	1345
554	Pi 5h, 125	6·1	29 11·27	+3·5659	+·0053	0	+20 25 20·9	+ 2·687	− ·516	− 13	5, 5	21·45, 21·45	6881
555	BD + 66° 401	6·2	29 34·91	+6·1409	+·0297	− 10	+66 38 54·8	+ 2·562	− ·888	− 29	7, 6	21·40, 21·46	6909
556	Gr. 966 S	6·5	5 29 41·042	+8·0155	+·0634	− 9*	+74 59 50·44	+ 2·644	−1·159	+ 19*	20, 23	20·00, 19·75	1334
557	Pi 5h, 117	6·0	30 25·64	+4·9226	+·0146	+ 8	+54 22 50·6	+ 2·579	− ·713	− 1	4, 6	20·81, 19·75	1348
558	Pi 5h, 136	7·1	31 13·03	+3·7664	+·0060	− 16	+27 36 53·9	+ 2·511	− ·546	− 40	5, 5	20·09, 20·09	6930
559	Gr. 991	6·2	31 37·85	+4·1909	+·0083	+ 1	+40 8 8·1	+ 2·475	− ·607	− 12	4, 5	20·31, 20·46	6952
560	ε Orio F	1·6	32 24·453	+3·0439	+·0034	0*	− 1 14 54·60	+ 2·408	− ·442	− 2*	1, 10	19·86, 20·29	1370
561	BD + 33° 1102	6·8	5 32 49·17	+3·9515	+·0067	+ 6	+33 30 51·0	+ 2·372	− ·573	− 3	5, 4	19·09, 21·08	6979
562	ζ Taur S	3·0	33 9·673	+3·5848	+·0050	+ 2*	+21 5 53·47	+ 2·342	− ·520	− 28*	10, 10	21·58, 21·58	1375
563	B.A.C. 1772	6·0	34 32·11	+3·8142	+·0057	+ 12	+29 10 24·8	+ 2·223	− ·554	− 5	5, 6	21·09, 21·25	7026
564	BD + 31° 1048	6·4	35 44·70	+3·8813	+·0058	+ 13	+31 19 7·3	+ 2·117	− ·564	− 8	5, 6	19·11, 19·60	7066
565	BD + 31° 1049	6·6	35 49·44	+3·8993	+·0059	+ 11	+31 52 52·6	+ 2·111	− ·566	+ 4	5, 5	20·87, 20·87	7072
566	Pi 5h, 184	6·8	5 37 31·87	+3·6270	+·0045	− 4	+22 37 27·0	+ 1·962	− ·527	− 22	5, 5	21·39, 21·39	7113
567	Gr. 944 P	6·5	37 43·235	+18·7899	+·3810	+160*	+85 9 46·70	+ 1·945	−2·728	+ 4*	173, 132	17·86, 17·12	1360
568	Pi 5h, 192	6·1	38 46·19	+3·6423	+·0044	+ 3	+23 10 12·9	+ 1·854	− ·529	− 23	5, 6	20·87, 20·76	7148
569	o Auri	5·7	40 5·34	+4·6479	+·0085	− 3	+49 47 43·2	+ 1·739	− ·676	− 8	6, 5	13·59, 14·10	1411
570	28 Caml	7·1	5 40 30·62	+5·1149	+·0111	+ 43	+56 53 41·5	+ 1·702	− ·743	− 28	2, 2	20·02, 20·02	1412
571	Gr. 1018	6·8	41 52·44	+4·2935	+·0063	+ 17	+42 30 2·2	+ 1·584	− ·625	− 86	6, 5	20·70, 20·85	7221
572	BD + 62° 784	6·0	41 59·78	+5·6631	+·0140	− 3	+62 46 56·2	+ 1·573	− ·824	− 9	5, 5	21·44, 21·44	7236
573	129 Taur	6·1	42 26·63	+3·4497	+·0035	+ 7	+15 47 41·3	+ 1·534	− ·502	+ 10	2, 2	21·11, 21·11	1422
574	τ Auri	4·6	43 58·59	+4·1584	+·0052	− 21	+39 9 24·6	+ 1·401	− ·604	− 26	1, 1	11·10, 12·03	1429
575	κ Orio F	2·1	44 11·931	+2·8450	+·0026	+ 2*	− 9 41 42·58	+ 1·381	− ·414	− 5*	5, 17	19·52, 19·34	1435
576	B.A.C. 1813	6·4	5 44 51·30	+6·4495	+·0173	+ 32	+68 27 8·4	+ 1·324	− ·939	− 40	5, 8	21·51, 21·48	7319
577	Gr. 1024	6·7	44 58·57	+4·7488	+·0071	+181	+51 29 36·5	+ 1·313	− ·691	− 40	6, 5	21·60, 21·73	7308
578	30 Caml	6·5	45 40·43	+5·2876	+·0093	+ 14	+58 56 40·3	+ 1·253	− ·770	− 23	5, 5	21·73, 21·73	7327
579	ν Auri	5·1	45 55·44	+4·0884	+·0047	+ 30	+37 17 8·7	+ 1·229	− ·596	− 38	1, 2	11·14, 12·58	1439
580	Pi 5h, 236	5·8	46 14·53	+3·7804	+·0037	− 7	+27 56 48·7	+ 1·203	− ·551	0	2, 3	22·11, 21·46	1444
581	ν Auri	4·2	5 46 17·50	+4·1579	+·0046	− 4	+39 7 41·1	+ 1·198	− ·605	+ 6	9, 9	11·10, 11·10	1442
582	Pi 5h, 237	6·6	46 32·37	+3·9098	+·0040	− 4	+32 6 16·4	+ 1·176	− ·570	+ 4	6, 5	19·11, 20·70	7338
583	Pi 5h, 243	6·5	47 42·21	+3·9695	+·0039	+ 9	+33 53 57·8	+ 1·075	− ·578	+ 3	6, 6	19·57, 19·67	7369
584	54 Orio	4·6	49 56·60	+3·5656	+·0029	−132	+20 15 50·3	+ 0·879	− ·519	− 94	1, 1	12·09, 12·09	1461
585	BD + 66° 413	6·6	49 57·89	+6·0834	+·0099	+ 73	+66 5 6·0	+ 0·877	− ·886	− 23	5, 4	17·66, 19·05	7452
586	Pi 5h, 256	6·2	5 50 6·93	+3·8971	+·0033	− 29	+31 41 31·3	+ 0·864	− ·568	−179	6, 6	15·75, 15·80	7426
587	α Orio F	Var.	51 6·673	+3·2461	+·0025	+ 19*	+ 7 23 39·70	+ 0·777	− ·473	+ 8*	12, 32	19·92, 19·59	1468
588	BD + 49° 1423	7·0	51 18·79	+4·6100	+·0043	+ 22	+49 1 9·5	+ 0·760	− ·672	− 20	5, 5	21·50, 21·50	7470
589	BD + 24, 1033	6·0	52 20·51	+3·6742	+·0027	+ 5	+24 14 23·9	+ 0·670	− ·536	− 2	5, 5	20·87, 20·87	7483
590	δ Auri S	3·8	53 21·086	+4·9304	+·0041	+ 98*	+54 16 50·80	+ 0·581	− ·718	−126*	11, 13	20·46, 19·64	1472
591	Gr. 1046	6·0	5 53 32·20	+4·6601	+·0036	+ 1	+49 55 5·5	+ 0·565	− ·679	− 13	6, 6	20·98, 20·98	7523
592	Br. 854	7·2	53 36·70	+4·9485	+·0040	+ 18	+54 32 31·0	+ 0·559	− ·721	− 37	5, 4	21·52, 21·61	7532
593	β Auri S	1·8	54 1·598	+4·4059	+·0031	− 44*	+44 56 29·64	+ 0·522	− ·642	− 5*	12, 14	19·37, 19·85	1478
594	π Auri	4·6	54 22·07	+4·4529	+·0030	+ 8	+45 55 54·5	+ 0·493	− ·649	− 8	2, 2	13·04, 13·04	1479
595	θ Auri S	2·6	54 36·389	+4·0872	+·0026	+ 45*	+37 12 32·05	+ 0·472	− ·596	− 90*	15, 15	16·11, 16·05	1482
596	Gr. 1030	6·7	5 54 48·72	+8·2708	+·0114	+ 55	+75 35 10·1	+ 0·454	−1·206	− 16	10, 10	21·25, 21·25	7606
597	Gr. 1055	6·6	54 49·88	+4·3898	+·0028	− 27	+44 35 18·4	+ 0·452	− ·639	− 42	1, 1	11·17, 11·17	1483
598	36 Auri	5·9	55 17·21	+4·5514	+·0028	+ 18	+47 53 56·1	+ 0·412	− ·664	− 21	2, 3	16·16, 15·45	1487
599	BD + 48° 1333	6·9	55 57·38	+4·6075	+·0027	− 7	+48 57 27·3	+ 0·354	− ·672	− 8	5, 5	21·08, 21·12	7598
600	Pi 5h, 287	6·7	56 17·63	+3·7704	+·0021	+ 2	+27 34 12·3	+ 0·324	− ·550	− 5	5, 5	21·71, 21·71	7597

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			h m s	s	s		° ′ ″	″	″				
601	BD + 31° 1164	6·5	5 56 19·36	+3·8766	+·0022	+ 2	+31 1 56·2	+ 0·322	− ·565	+ 6	4, 4	21·60, 21·60	7600
602	Pi 5h, 280	6·8	5 56 58·89	+4·6600	+·0024	+ 39	+49 54 23·3	+ 0·264	− ·679	− 45	3, 4	22·13, 21·88	1493
603	Br. 865	7·3	5 57 28·23	+4·3355	+·0020	+ 21	+43 22 45·1	+ 0·221	− ·632	− 26	5, 4	19·93, 22·12	7625
604	BD + 32° 1166	6·5	5 57 59·98	+3·9288	+·0019	+ 65	+32 38 28·9	+ 0·175	− ·573	−212	7, 8	20·12, 19·12	7636
605	BD + 59° 937	6·4	5 58 28·26	+5·3321	+·0018	+ 13	+59 23 50·7	+ 0·134	− ·777	− 51	5, 7	21·92, 21·70	7667
606	39 Auri	6·2	5 59 39·87	+4·3185	+·0015	− 25	+42 59 22·0	+ 0·030	− ·629	−145	1, 1	11·17, 11·17	1506
607	BD + 35° 1334	6·4	6 1 7·66	+4·0226	+·0012	−102	+35 24 3·4	− 0·099	− ·586	−306	5, 4	18·47, 20·31	7713
608	40 Auri	5·7	6 1 24·82	+4·1355	+·0012	+ 11	+38 29 26·0	− 0·124	− ·603	− 54	2, 1	11·14, 11·18	7723
609	BD + 29° 1112	6·3	6 1 35·15	+3·8295	+·0013	+ 14	+29 31 11·4	− 0·139	− ·558	− 8	5, 6	20·09, 20·42	7725
610	Gr. 1077	6·5	6 2 6·47	+4·2702	+·0008	+ 9	+41 51 47·9	− 0·184	− ·622	− 24	4, 5	18·15, 16·75	7741
611	ν Orio F	4·4	6 3 17·367	+3·4253	+·0014	+ 6*	+14 46 43·51	− 0·288	− ·499	− 36*	12, 24	20·45, 20·78	1525
612	Pi 5h, 338	6·0	6 5 1·11	+3·6181	+·0010	− 10	+22 12 13·1	− 0·439	− ·527	− 15	5, 6	21·05, 21·22	7824
613	30 Gemi	6·0	6 5 10·71	+3·6433	+·0009	+ 11	+23 7 37·5	− 0·453	− ·531	− 13	2, 2	21·50, 21·50	7827
614	36 Caml	5·5	6 5 18·45	+6·0365	−·0042	+ 19	+65 44 8·0	− 0·464	− ·879	− 27	1, 1	15·14, 15·14	1530
615	BD + 52° 1041	6·6	6 5 44·11	+4·8242	−·0013	+ 17	+52 39 52·7	− 0·502	− ·703	− 74	5, 7	21·14, 21·01	7850
616	BD + 32° 1217	6·1	6 7 25·38	+3·9306	+·0001	+ 6	+32 42 41·4	− 0·649	− ·572	− 3	6, 7	14·08, 13·67	7888
617	68 Orio	6·0	6 7 34·81	+3·5539	+·0008	+ 4	+19 48 31·3	− 0·663	− ·517	− 14	4, 5	21·34, 21·49	1545
618	ξ Orio	4·4	6 7 40·55	+3·4114	+·0010	+ 6	+14 13 37·8	− 0·671	− ·497	− 34	1, 1	12·09, 12·09	1548
619	6 Gemi	6·5	6 7 46·27	+3·6377	+·0006	+ 17	+22 55 36·7	− 0·679	− ·530	− 14	3, 4	19·79, 19·86	1549
620	Gr. 1103	6·3	6 7 50·43	+4·7335	+·0019	− 3	+51 11 36·7	− 0·686	− ·689	− 69	5, 5	20·21, 20·21	7907
621	η Gemi S	3·4	6 10 21·035	+3·6266	+·0003	− 45*	+22 31 47·95	− 0·905	− ·528	− 17*	8, 9	19·62, 19·98	1561
622	22H Caml S	4·7	6 10 35·076	+6·6146	−·0124	+ 22*	+69 20 55·81	− 0·925	− ·963	−109*	10, 11	19·90, 19·01	1556
623	I Lync	5·5	6 11 0·05	+5·5354	−·0066	+ 6	+61 32 30·9	− 0·962	− ·805	− 3	2, 2	13·02, 13·02	1560
624	5 Mono F	4·2	6 11 11·861	+2·9266	+·0014	− 3*	− 6 15 2·30	− 0·979	− ·426	− 21*	5, 14	21·54, 20·40	1570
625	8 Gemi	6·4	6 11 44·13	+3·6668	+·0000	− 12	+23 59 44·8	− 1·025	− ·533	− 24	2, 2	19·62, 19·62	1573
626	k Orio	5·3	6 12 13·83	+3·3636	+·0006	+ 60	+12 17 37·9	− 1·069	− ·489	+193	1, 1	12·12, 12·12	1577
627	Gr. 1124	6·4	6 12 48·53	+5·0930	−·0056	− 33	+56 33 30·2	− 1·120	− ·740	− 29	5, 4	18·86, 18·30	8063
628	2 Lync S	4·5	6 13 0·416	+5·2967	−·0067	− 7*	+59 2 24·49	− 1·137	− ·770	+ 21*	10, 10	19·17, 19·16	1575
629	Pi 6h, 43	7·0	6 13 38·82	+3·7596	−·0004	+ 9	+27 14 26·5	− 1·193	− ·547	− 76	5, 7	21·08, 20·84	1583
630	45 Auri	5·5	6 15 40·57	+4·8738	−·0057	+ 34	+53 29 17·4	− 1·370	− ·708	− 94	3, 4	13·10, 12·87	1593
631	BD + 29° 1190	6·3	6 16 24·67	+3·8292	−·0012	+ 30	+29 34 34·5	− 1·434	− ·556	− 41	6, 7	19·09, 18·82	8156
632	μ Gemi S	3·0	6 18 25·401	+3·6260	−·0008	+ 44*	+22 33 12·43	− 1·610	− ·526	−113*	11, 11	20·93, 20·10	1604
633	ψ^1 Auri S	5·0	6 19 7·421	+4·6225	−·0057	+ 13*	+49 19 40·60	− 1·671	− ·670	− 5*	16, 17	15·53, 15·80	1606
634	BD + 70° 401	6·0	6 19 41·63	+6·8490	−·0260	+ 9	+70 34 43·3	− 1·720	− ·994	+ 23	10, 11	20·42, 20·48	8293
635	8 Mono F	4·5	6 19 47·608	+3·1807	+·0005	− 8*	+ 4 37 55·94	− 1·729	− ·461	− 3*	4, 16	18·62, 19·58	1611
636	Pi 6h, 78	6·7	6 20 6·62	+3·6961	−·0013	+ 6	+25 5 22·0	− 1·756	− ·536	− 17	2, 2	21·14, 21·14	1612
637	Pi 6h, 89	6·3	6 20 59·44	+3·6478	−·0012	− 3	+23 22 11·6	− 1·833	− ·529	− 26	5, 5	19·67, 19·67	8290
638	48 Auri	5·6	6 23 44·91	+3·8570	−·0026	− 5	+30 32 27·0	− 2·074	− ·558	− 23	8, 7	11·61, 11·68	1629
639	10 Mono F	5·1	6 24 15·373	+2·9632	+·0008	− 2*	− 4 42 52·30	− 2·117	− ·429	+ 14*	6, 17	19·47, 18·61	1634
640	ν Gemi S	4·1	6 24 30·654	+3·5633	−·0013	− 8*	+20 15 39·71	− 2·140	− ·515	− 21*	10, 11	21·01, 21·02	1635
641	Pi 6h, 126	6·1	6 27 33·63	+3·9183	−·0036	− 13	+32 30 35·1	− 2·404	− ·565	− 31	6, 6	14·09, 14·09	1646
642	B.A.C. 2083	6·2	6 28 27·51	+7·6242	−·0520	−345	+73 45 28·1	− 2·483	−1·102	− 27	11, 9	20·28, 20·21	8540
643	Pi 6h, 144	5·7	6 29 20·65	+3·4086	−·0010	− 15	+14 12 51·0	− 2·559	− ·491	− 94	7, 7	20·29, 20·29	1663
644	8 Lync	6·2	6 30 50·71	+5·5167	−·0201	−274	+61 32 56·9	− 2·689	− ·796	−280	7, 8	14·24, 14·35	1665
645	11 Lync	6·0	6 31 16·06	+5·1052	−·0152	+ 8	+56 55 11·2	− 2·726	− ·736	+ 11	4, 4	20·59, 20·59	1672
646	Gr. 1190	5·9	6 31 23·57	+4·1262	−·0059	+ 8	+38 30 27·5	− 2·737	− ·595	− 35	5, 4	12·95, 13·42	1676
647	BD + 71° 359	6·1	6 31 40·93	+7·1017	−·0470	+ 43	+71 48 50·8	− 2·762	−1·024	+ 5	12, 12	20·00, 20·00	8630
648	10 Lync	7·2	6 31 43·49	+5·5147	−·0207	+ 22	+61 32 30·7	− 2·767	− ·796	− 10	2, 1	21·68, 20·14	1675
649	γ Gemi F	1·8	6 33 22·795	+3·4636	−·0018	+ 31*	+16 27 52·42	− 2·909	− ·498	− 47*	8, 25	19·86, 19·53	1690
650	51 Auri S	5·9	6 33 27·791	+4·1611	−·0066	− 21*	+39 27 30·36	− 2·916	− ·599	−116*	14, 14	14·98, 14·98	1687

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			h m s	s	s		° ′ ″	″					
651	23H Caml.....S	5·7	6 33 27·854	+10·3117	−·1390	−287*	+79 38 58·81	− 2·916	−1·486	−615*	20, 19	20·28, 20·70	1673
652	52 Auri.....	5·3	6 33 35·88	+ 4·1809	−·0068	− 13	+39 58 6·0	− 2·928	− ·601	− 32	3, 1	14·14, 20·09	1688
653	50 Auri.....	5·0	6 33 58·62	+ 4·2863	−·0078	+ 5	+42 33 24·2	− 2·960	− ·617	− 61	1, 2	11·20, 11·18	1694
654	Gr. 1201.....	6·5	6 34 31·58	+ 4·3523	−·0086	+ 34	+44 4 53·5	− 3·008	− ·626	− 6	6, 5	19·44, 19·29	8678
655	BD + 22° 1416.....	6·2	6 34 34·59	+ 3·6092	−·0028	+ 6	+22 5 53·8	− 3·013	− ·519	− 29	5, 6	21·73, 20·97	8672
656	25 Gemi.....	6·8	6 36 37·38	+ 3·7822	−·0042	+ 6	+28 16 2·9	− 3·190	− ·543	− 15	2, 2	20·51, 20·51	1704
657	15 Mono.....	5·2	6 36 50·96	+ 3·3046	−·0013	+ 2	+ 9 57 59·0	− 3·209	− ·474	− 7	2, 4	12·17, 12·12	1706
658	55 Auri.....	5·2	6 37 37·65	+ 4·3728	−·0097	− 36	+44 35 53·5	− 3·276	− ·627	− 39	3, 5	14·16, 14·74	1707
659	BD + 53° 1056.....	6·4	6 38 8·20	+ 4·8458	−·0154	+ 62	+53 22 29·7	− 3·320	− ·695	−181	6, 6	20·14, 20·14	8769
660	BD + 37° 1567.....	5·9	6 38 8·24	+ 4·0739	−·0069	+ 33	+37 13 17·2	− 3·320	− ·584	− 45	7, 7	15·88, 16·73	8766
661	ε Gemi.....S	3·1	6 39 19·147	+ 3·6926	−·0040	0*	+25 12 24·48	− 3·422	− ·529	− 20*	17, 18	15·62, 16·26	1717
662	ξ Gemi.....F	3·3	6 41 4·829	+ 3·3758	−·0020	− 78*	+12 58 40·22	− 3·574	− ·483	−201*	17, 50	19·58, 18·50	1725
663	56 Auri.....S	5·6	6 41 20·147	+ 4·3271	−·0102	+ 7*	+43 39 13·37	− 3·596	− ·619	+158*	11, 11	15·50, 16·41	1724
664	57 Auri.....	5·4	6 41 56·70	+ 4·5775	−·0134	− 9	+48 52 14·0	− 3·648	− ·655	+ 2	3, 3	19·12, 19·12	1728
665	18 Mono.....	4·8	6 43 57·03	+ 3·1300	−·0008	− 4	+ 2 29 44·3	− 3·820	− ·446	− 25	2, 3	12·17, 12·15	1740
666	BD + 32° 1414.....	6·0	6 44 48·20	+ 3·9141	−·0069	− 35	+32 41 35·7	− 3·893	− ·557	− 52	4, 4	12·12, 12·12	1745
667	58 Auri.....	5·2	6 45 27·920	+ 4·2471	−·0104	− 16	+41 52 17·0	− 3·950	− ·605	−135	6, 7	15·96, 15·28	1748
668	43 Caml.....	5·1	6 45 37·60	+ 6·4814	−·0516	+ 19	+68 58 40·1	− 3·964	− ·924	+ 9	8, 6	14·98, 14·78	1744
669	14 Lync.....	5·5	6 46 28·55	+ 5·2983	−·0267	0	+59 32 22·8	− 4·037	− ·754	− 47	3, 3	12·12, 12·12	1753
670	B.A.C. 2238.....	5·9	6 47 26·84	+ 3·6466	−·0047	− 29	+23 41 30·6	− 4·121	− ·518	− 16	2, 2	20·65, 20·65	1760
671	BD + 45° 1359.....	6·9	6 47 39·58	+ 4·3773	−·0127	+ 11	+44 55 56·7	− 4·138	− ·623	− 85	5, 5	16·75, 16·75	8988
672	θ Gemi.....S	3·6	6 47 50·845	+ 3·9563	−·0077	+ 5*	+34 3 11·21	− 4·154	− ·562	− 54*	14, 14	15·24, 15·53	1763
673	59 Auri.....	6·3	6 47 51·97	+ 4·1299	−·0097	+ 5	+38 57 36·4	− 4·156	− ·588	+ 5	3, 3	14·14, 14·14	1762
674	BD + 35° 1511.....	6·2	6 48 2·43	+ 4·0183	−·0085	− 14	+35 52 45·4	− 4·171	− ·571	+ 11	5, 5	16·95, 16·95	8995
675	60 Auri.....	6·6	6 48 4·93	+ 4·1137	−·0096	+ 26	+38 32 0·0	− 4·175	− ·586	−182	2, 2	19·65, 19·65	1764
676	24H Caml.....S	4·9	6 49 9·227	+ 8·7629	−·1336	+249*	+77 4 34·40	− 4·266	−1·246	− 15*	23, 26	20·55, 20·64	1758
677	Gr. 1237.....	6·6	6 49 50·00	+ 4·3331	−·0127	+ 13	+44 0 18·7	− 4·324	− ·615	− 12	2, 5	18·33, 20·32	9042
678	38 Gemi.....	4·8	6 50 24·82	+ 3·3805	−·0029	+ 50	+13 16 29·4	− 4·374	− ·479	− 85	2, 2	12·14, 12·14	1778
679	37 Gemi.....	5·9	6 50 42·04	+ 3·6938	−·0056	− 30	+25 28 14·8	− 4·398	− ·523	+ 13	2, 2	20·68, 20·68	1780
680	θ C. Maj.....F	4·3	6 50 42·321	+ 2·7970	+·0003	− 93*	−11 56 37·18	− 4·399	− ·396	− 15*	5, 15	20·34, 21·13	1783
681	15 Lync.....	4·5	6 50 47·29	+ 5·2021	−·0274	+ 6	+58 31 22·2	− 4·406	− ·738	−134	6, 5	13·64, 13·34	1776
682	Pi 6h, 251.....	6·3	6 50 48·91	+ 5·1318	−·0261	+ 24	+57 39 37·8	− 4·408	− ·728	+ 19	5, 5	20·11, 20·11	9081
683	BD + 46° 1205.....	6·2	6 51 22·64	+ 4·4605	−·0150	− 96	+46 48 17·1	− 4·456	− ·632	− 96	5, 7	21·33, 21·43	9089
684	BD + 33° 1433.....	6·3	6 52 5·14	+ 3·9437	−·0084	− 12	+33 46 45·9	− 4·516	− ·558	− 4	8, 8	13·37, 13·37	9109
685	Gr. 1228.....	5·8	6 52 50·85	+ 6·8320	−·0706	+ 39	+70 54 41·6	− 4·581	− ·968	− 20	12, 13	20·05, 20·14	9152
686	62 Auri.....	6·3	6 53 56·41	+ 4·0938	−·0106	− 29	+38 9 25·1	− 4·674	− ·578	−128	6, 6	12·66, 14·15	1794
687	40 Gemi.....	6·6	6 54 50·20	+ 3·7065	−·0063	− 11	+26 1 2·8	− 4·750	− ·523	− 14	5, 5	20·72, 20·72	1798
688	41 Gemi.....	6·2	6 55 57·29	+ 3·4491	−·0039	− 9	+16 11 1·6	− 4·846	− ·486	− 12	1, 1	12·09, 12·09	1803
689	ζ Gemi.....F	Var.	6 59 39·721	+ 3·5603	−·0054	− 3*	+20 40 54·01	− 5·159	− ·499	− 8*	14, 21	20·99, 20·97	1815
690	γ C. Maj.....F	4·1	7 0 21·9	+ 2·7145	+·0004	− 1*	−15 31 16·25	− 5·219	− ·380	− 14*	0, 4	18·39	1819
691	Pi 6h, 316.....	5·9	7 1 15·17	+ 3·9616	−·0105	− 44	+34 35 23·8	− 5·294	− ·555	− 68	3, 2	15·13, 17·16	1822
692	BD + 34° 1530.....	6·1	7 2 26·96	+ 3·9451	−·0104	− 19	+34 7 35·7	− 5·395	− ·552	− 30	5, 7	19·17, 18·30	9384
693	BD + 34° 1533.....	6·6	7 3 18·23	+ 3·9384	−·0105	− 10	+33 57 4·2	− 5·467	− ·550	− 38	6, 6	19·31, 19·31	9405
694	BD + 37° 1660.....	6·3	7 3 32·04	+ 4·0614	−·0123	− 4	+37 33 50·8	− 5·486	− ·567	− 17	7, 7	18·56, 20·14	9412
695	51H Ceph.....P	5·4	7 5 56·834	+28·9887	−3·0760	−490*	+87 10 9·79	− 5·689	−4·050	− 36*	162, 120	17·90, 17·40	1801
696	τ Gemi.....	4·5	7 6 22·08	+ 3·8232	−·0095	− 19	+30 22 10·7	− 5·724	− ·530	− 47	3, 3	12·18, 12·18	1840
697	63 Auri.....S	5·1	7 6 29·958	+ 4·1263	−·0140	+ 41*	+39 26 39·32	− 5·735	− ·574	− 3*	17, 14	13·98, 14·58	1841
698	22 Mono.....F	4·2	7 8 2·084	+ 3·0646	−·0017	+ 2*	− 0 22 2·40	− 5·863	− ·425	+ 11*	11, 24	20·62, 20·28	1853
699	51 Gemi.....	5·3	7 9 3·91	+ 3·4457	−·0052	+ 8	+16 17 15·0	− 5·950	− ·477	− 50	2, 0	12·16,	1856
700	18 Lync.....	5·4	7 9 22·50	+ 5·2621	−·0398	−116	+59 46 25·2	− 5·976	− ·730	−258	8, 6	14·40, 15·15	1854

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			h m s	s	s		° ′ ″	″	″				
701	Gr. 1281	5·7	7 10 16·23	+ 4·4571	−·0210	+ 38	+47 22 29·7	− 6·051	− ·618	−180	3, 4	20·48, 20·66	1860
702	53 Gemi	6·1	11 16·26	+ 3·7501	−·0092	− 14	+28 1 45·6	− 6·134	− ·517	− 9	5, 6	14·95, 14·49	1868
703	Gr. 1284	6·0	11 40·83	+ 4·7159	−·0272	+ 2	+52 15 54·0	− 6·168	− ·652	− 30	5, 5	20·28, 20·28	9642
704	64 Auri	6·0	12 49·51	+ 4·1770	−·0164	− 10	+41 1 4·8	− 6·263	− ·575	0	9, 7	11·72, 11·80	1880
705	B.A.C. 2379	4·9	12 50·34	+ 4·5643	−·0243	− 5	+49 35 59·3	− 6·264	− ·629	− 8	2, 1	20·65, 21·21	1879
706	BD + 31° 1529	5·9	7 13 16·63	+ 3·8378	−·0108	− 18	+31 5 29·7	− 6·300	− ·528	− 20	6, 7	12·81, 12·56	9688
707	λ Gemi F	3·5	13 47·051	+ 3·4526	−·0057	− 33*	+16 40 36·90	− 6·342	− ·475	− 48*	7, 21	20·14, 18·53	1886
708	25H Caml P	5·3	15 23·806	+12·7579	−·5459	+ 24*	+82 33 38·68	− 6·476	−1·758	− 45*	79, 62	20·53, 20·08	1871
709	δ Gemi S	6·6	15 38·748	+ 3·5867	−·0076	+ 13*	+22 7 18·39	− 6·497	− ·492	− 17*	10, 10	18·44, 19·44	1898
710	Gr. 1296	6·6	15 45·55	+ 4·2432	−·0184	− 14	+42 47 48·4	− 6·506	− ·582	− 50	5, 5	15·16, 15·22	9765
711	Gr. 1295	5·8	7 15 51·94	+ 4·3529	−·0206	− 34	+45 22 6·6	− 6·515	− ·598	+ 5	3, 3	21·13, 21·13	1897
712	Br. 1056 S	5·9	16 45·247	+ 4·9039	−·0342	+ 2*	+55 25 28·13	− 6·588	− ·672	− 38*	12, 17	20·74, 21·10	1906
713	65 Auri	5·3	17 2·22	+ 4·0201	−·0146	− 66	+36 54 11·0	− 6·611	− ·550	− 41	9, 8	12·61, 12·80	1912
714	66 Auri	5·5	18 57·07	+ 4·1592	−·0176	+ 1	+40 49 5·3	− 6·769	− ·568	− 24	10, 8	12·27, 12·42	1919
715	58 Gemi	6·5	18 57·88	+ 3·6090	−·0083	− 15	+23 5 28·0	− 6·771	− ·492	− 46	4, 4	20·65, 20·65	1922
716	BD + 52° 1205	6·0	7 19 6·66	+ 4·6843	−·0295	+ 19	+52 2 3·0	− 6·782	− ·640	− 40	5, 5	15·95, 15·95	9860
717	59 Gemi	5·9	19 53·58	+ 3·7345	−·0103	+ 10	+27 47 3·0	− 6·848	− ·509	+ 15	4, 4	20·39, 20·39	1926
718	ι Gemi S	3·9	21 4·251	+ 3·7379	−·0105	− 86*	+27 56 54·43	− 6·944	− ·508	− 90*	14, 13	14·51, 14·77	1931
719	Pi 7h, 97	6·8	22 24·51	+ 3·5703	−·0082	−220	+21 41 12·8	− 7·053	− ·484	− 42	3, 2	20·15, 20·16	1940
720	61 Gemi	6·1	22 31·23	+ 3·5381	−·0077	− 7	+20 24 31·2	− 7·062	− ·480	− 24	2, 2	20·69, 20·69	1941
721	β C. Min F	2·9	7 23 5·094	+ 3·2582	−·0043	− 34*	+ 8 26 30·03	− 7·109	− ·441	− 43*	8, 32	17·98, 17·64	1944
722	Pi 7h, 67 S	6·0	23 5·484	+ 6·2645	−·0871	− 5*	+68 37 15·76	− 7·109	− ·850	− 44*	10, 10	20·27, 20·27	1937
723	Pi 7h, 92	5·9	23 16·48	+ 4·4766	−·0259	+ 10	+48 20 17·0	− 7·124	− ·607	− 58	3, 3	20·81, 20·81	1943
724	B.A.C. 2463	7·1	24 0·52	+ 3·7279	−·0108	− 4	+27 42 21·5	− 7·184	− ·504	+ 5	6, 7	21·64, 21·71	9980
725	ρ Gemi S	4·3	24 17·426	+ 3·8500	−·0129	+117*	+31 56 5·18	− 7·207	− ·521	+183*	15, 14	13·09, 13·23	1952
726	64 Gemi	5·2	7 24 40·21	+ 3·7430	−·0112	− 24	+28 16 27·4	− 7·238	− ·505	− 59	2, 3	19·69, 20·17	1956
727	6 C. Min F	4·9	25 37·383	+ 3·3409	−·0054	+ 2*	+12 9 46·83	− 7·316	− ·450	− 19*	9, 16	20·91, 20·83	1962
728	Pi 7h, 115	6·9	28 5·36	+ 4·6289	−·0316	− 22	+51 28 33·9	− 7·516	− ·622	− 28	5, 5	19·93, 19·93	10096
729	68 Gemi	5·3	29 19·77	+ 3·4270	−·0069	− 10	+15 59 21·0	− 7·618	− ·458	− 25	3, 3	12·19, 12·19	1977
730	α Gemi	2·0	29 49·23	+ 3·8461	−·0138	−135	+32 3 17·6	− 7·656	− ·515	−110	7, 5	14·45, 14·34	1979
731	Br. 1090	5·6	7 30 23·04	+ 3·8178	−·0133	− 25	+31 7 29·8	− 7·702	− ·510	− 1	5, 5	11·15, 11·15	1981
732	B.A.C. 2488	5·9	31 5·29	+ 4·3643	−·0256	− 9	+46 20 50·0	− 7·758	− ·583	− 46	5, 5	14·34, 14·34	1986
733	ν Gemi	4·2	31 18·24	+ 3·7021	−·0114	− 20	+27 3 49·3	− 7·776	− ·494	−116	5, 5	14·36, 14·36	1987
734	Gr. 1338	6·6	32 10·06	+ 4·1118	−·0198	− 3	+40 11 38·9	− 7·846	− ·548	− 41	5, 4	15·16, 16·16	10193
735	BD + 49° 1653	6·8	32 18·62	+ 4·4842	−·0292	− 24	+48 56 34·2	− 7·857	− ·598	− 37	5, 5	19·75, 19·75	10201
736	25 Mono F	5·2	7 33 32·967	+ 2·9883	−·0021	− 47*	− 3 56 32·85	− 7·957	− ·396	+ 18*	6, 22	21·34, 19·77	1999
737	70 Gemi	5·9	33 37·71	+ 3·9385	−·0163	+ 32	+35 13 4·4	− 7·963	− ·524	+ 18	6, 6	12·50, 12·69	1997
738	o Gemi	5·1	34 16·44	+ 3·9228	−·0161	− 22	+34 45 29·1	− 8·015	− ·520	−122	8, 8	12·65, 12·65	2001
739	Pi 7h, 161	6·1	34 40·25	+ 3·6278	−·0105	− 7	+24 23 38·0	− 8·047	− ·481	− 2	6, 6	20·49, 20·49	10265
740	Br. 1101	7·0	35 6·44	+ 3·8424	−·0146	− 12	+32 10 58·4	− 8·082	− ·509	− 50	5, 5	18·97, 21·16	10280
741	Gr. 1352	6·0	7 35 12·02	+ 4·0460	−·0191	− 40	+38 31 2·8	− 8·089	− ·563	− 13	5, 7	17·54, 18·58	10288
742	α C. Min F	0·5	35 22·626	+ 3·1887	−·0042	−468*	+ 5 25 5·94	− 8·103	− ·422	−028*	5, 14	20·53, 19·15	2008
743	Pi 7h, 156	5·8	35 40·31	+ 4·4442	−·0292	− 53	+48 18 30·5	− 8·127	− ·590	−134	2, 2	18·18, 18·18	2006
744	BD + 23° 1780	6·2	36 29·21	+ 3·5954	−·0102	− 8	+23 11 35·2	− 8·192	− ·475	− 4	5, 6	20·58, 20·69	10318
745	24 Lync S	5·0	36 40·232	+ 5·0929	−·0507	− 39*	+58 53 15·51	− 8·207	− ·674	− 61*	11, 9	15·15, 15·47	2010
746	γ Mono	4·1	7 37 39·9	+ 2·8719	−·0012	− 51	− 9 22 29·2	− 8·286	− ·378	− 24	0, 2	12·16	2021
747	BD + 34° 1657	6·5	37 52·17	+ 3·8987	−·0163	− 61	+34 10 37·5	− 8·302	− ·514	− 9	5, 6	14·97, 14·32	10354
748	Pi 7h, 179	6·2	38 54·31	+ 3·5775	−·0102	− 17	+22 34 39·2	− 8·384	− ·470	+ 8	5, 5	20·33, 20·33	10378
749	51 Caml	6·2	39 30·79	+ 5·7499	−·0803	+ 71	+65 38 12·4	− 8·433	− ·756	+ 12	6, 6	14·49, 14·49	2024
750	κ Gemi S	3·5	39 55·330	+ 3·6268	−·0112	− 16*	+24 34 45·06	− 8·465	− ·475	− 62*	11, 12	20·63, 20·60	2029

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			h m s	s	s		° ′ ″	″	″				
751	β Gemi.....S	1·1	7 40 43·767	+ 3·7214	−·0131	−471*	+28 12 30·88	− 8·529	− ·487	− 56*	11, 17	16·52, 18·04	2031
752	BD + 37° 1769.....	5·5	41 39·20	+ 4·0057	−·0194	+ 21	+37 42 0·8	− 8·602	− ·524	+ 17	6, 4	12·00, 12·18	2037
753	g Gemi.....	5·2	41 47·09	+ 3·4811	−·0088	− 48	+18 41 40·1	− 8·612	− ·455	− 69	2, 2	12·14, 12·14	2040
754	π Gemi.....S	5·4	42 40·434	+ 3·8731	−·0166	+ 3*	+33 36 3·73	− 8·683	− ·505	− 40*	20, 20	14·40, 14·35	2049
755	82 Gemi.....	6·5	44 4·71	+ 3·5907	−·0110	− 9	+23 19 40·6	− 8·793	− ·467	− 15	4, 4	20·13, 20·13	2054
756	Pi 7h, 199.....	6·3	7 45 11·67	+ 4·7411	−·0425	− 23	+54 19 4·1	− 8·881	− ·615	+ 48	6, 7	20·52, 20·62	2057
757	Pi 7h, 215.....	6·5	46 13·33	+ 3·8617	−·0170	− 11	+33 25 26·4	− 8·961	− ·500	− 4	7, 8	13·84, 13·50	10579
758	9 Pupp.....F	5·5	48 17·936	+ 2·7828	−·0006	− 41*	−13 41 52·73	− 9·123	− ·357	−339*	4, 12	20·64, 20·68	2075
759	84 Gemi.....	7·4	48 33·84	+ 3·5660	−·0111	+ 1	+22 31 43·4	− 9·144	− ·459	− 24	3, 4	21·14, 21·41	2074
760	φ Gemi.....	5·1	48 54·63	+ 3·6772	−·0134	− 22	+26 57 39·2	− 9·171	− ·473	− 37	5, 3	13·36, 12·14	2078
761	26 Lync.....S	5·8	7 49 15·457	+ 4·3804	−·0319	− 42*	+47 45 37·92	− 9·198	− ·563	− 8*	14, 14	15·10, 15·09	2079
762	52 Caml.....	6·9	50 22·41	+ 4·8760	−·0500	+ 14	+56 42 12·0	− 9·285	− ·626	− 25	2, 2	21·17, 21·17	2085
763	Gr. 1374.....	5·7	51 15·09	+ 7·2278	−·1867	− 20	+74 7 14·5	− 9·352	− ·928	− 33	2, 4	14·68, 13·40	2084
764	1 Canc.....	6·1	52 44·09	+ 3·4104	−·0086	− 19	+15 59 30·0	− 9·467	− ·434	− 49	4, 4	12·18, 12·18	2098
765	Gr. 1384.....	6·4	53 0·76	+ 4·2166	−·0280	+ 37	+44 10 44·2	− 9·489	− ·537	+ 9	7, 6	13·74, 14·17	10757
766	Gr. 1385.....	6·0	7 55 4·10	+ 5·0419	−·0596	+ 23	+59 15 9·3	− 9·647	− ·640	+ 24	7, 7	14·44, 14·44	2101
767	53 Caml.....	6·3	55 18·86	+ 5·1446	−·0644	− 19	+60 31 52·3	− 9·665	− ·653	− 22	6, 6	14·99, 14·99	2105
768	27 Mono.....	5·1	55 59·39	+ 3·0018	−·0028	− 33	− 3 28 25·8	− 9·717	− ·379	+ 1	1, 7	12·16, 12·17	2115
769	BD + 35° 1731.....	6·7	57 2·83	+ 3·9081	−·0202	− 33	+35 37 15·8	− 9·798	− ·493	− 13	7, 5	13·72, 14·75	10869
770	χ Gemi.....S	5·2	58 54·919	+ 3·6900	−·0150	− 15*	+28 0 20·56	− 9·940	− ·463	− 52*	17, 19	13·87, 13·79	2131
771	Pi 7h, 269.....	7·3	7 59 3·18	+ 4·9283	−·0569	− 98	+57 59 14·0	− 9·950	− ·619	− 91	3, 3	20·16, 20·16	2129
772	8 Canc.....F	5·2	8 0 53·931	+ 3·3465	−·0081	− 22*	+13 19 58·95	−10·090	− ·417	− 78*	18, 25	18·40, 20·51	2138
773	28 Lync.....	6·5	1 58·49	+ 4·1646	−·0289	+ 4	+43 28 37·2	−10·172	− ·519	− 31	3, 3	11·19, 11·19	2142
774	27 Lync.....S	4·9	2 49·408	+ 4·5289	−·0421	− 58*	+51 43 27·96	−10·235	− ·563	− 8*	10, 13	16·30, 15·81	2145
775	Gr. 1407.....	6·0	3 55·17	+ 4·9402	−·0602	− 27	+58 28 10·6	−10·318	− ·613	− 79	7, 7	20·30, 20·30	11050
776	Br. 1159.....	6·7	4 14·32	+ 4·1274	−·0282	+ 11	+42 39 5·8	−10·342	− ·512	− 72	4, 2	15·65, 20·12	2148
777	55 Caml.....	5·6	8 5 22·28	+ 5·9996	−·1209	+ 8	+68 41 48·1	−10·426	− ·743	+ 5	5, 4	14·38, 14·93	2150
778	Pi 7h, 311.....	6·0	7 52·19	+ 4·7972	−·0558	+ 15	+56 40 43·6	−10·612	− ·589	− 39	1, 1	19·17, 19·17	2162
779	Br. 1147.....S	5·9	10 9·917	+ 7·5871	−·2595	+ 67*	+75 59 17·84	−10·782	− ·928	+ 12*	23, 23	18·23, 18·28	2174
780	Br. 1169.....	7·0	10 46·66	+ 4·9759	−·0659	+ 13	+59 25 11·7	−10·827	− ·606	− 37	2, 3	20·65, 20·45	2182
781	β Canc.....F	3·7	12 26·972	+ 3·2585	−·0072	− 35*	+ 9 25 4·05	−10·950	− ·393	− 54*	9, 27	20·28, 17·67	2195
782	Pi 8h, 15.....	5·8	8 12 29·78	+ 4·6347	−·0507	− 24	+54 22 36·6	−10·954	− ·561	− 43	5, 5	20·37, 20·37	11272
783	30 Lync.....	6·1	14 23·23	+ 4·8527	−·0620	+ 72	+57 58 42·2	−11·093	− ·585	+ 18	2, 2	20·66, 20·66	2197
784	Pi 8h, 30.....	6·8	16 26·62	+ 5·0582	−·0739	+ 15	+60 52 12·5	−11·241	− ·605	− 3	4, 4	20·66, 20·66	2203
785	31 Lync.....S	4·4	17 42·435	+ 4·1162	−·0315	− 8*	+43 25 47·89	−11·332	− ·490	−107*	16, 17	15·12, 15·48	2208
786	Gr. 1433.....	6·3	19 38·40	+ 4·0681	−·0303	+ 7	+42 14 51·6	−11·471	− ·482	− 7	5, 5	12·97, 12·97	2220
787	BD + 35° 1819.....	6·1	8 20 17·21	+ 3·8459	−·0228	− 1	+35 15 18·6	−11·518	− ·454	− 19	5, 4	11·20, 11·20	11473
788	22 Canc.....	6·0	21 54·28	+ 3·6549	−·0173	− 23	+28 8 30·6	−11·633	− ·428	−131	3, 3	20·14, 20·14	2232
789	30 Mono.....F	3·9	21 54·817	+ 3·0032	−·0032	− 44*	− 3 39 39·08	−11·634	− ·352	− 25*	9, 28	17·97, 17·19	2237
790	Gr. 1119.....P	7·3	23 37·326	+57·358	−31·945	− 29*	+88 51 27·93	−11·756	−6·768	+ 8*	129, 80	17·44, 16·72	2135
791	o U. Maj.....S	3·4	24 2·844	+ 5·0205	−·0769	−167*	+60 58 13·37	−11·785	− ·587	−114*	10, 10	18·48, 18·48	2247
792	29 Canc.....	6·2	8 24 26·40	+ 3·3512	−·0098	− 9	+14 27 37·2	−11·813	− ·390	− 18	1, 1	12·17, 12·17	2253
793	Pi 8h, 52.....	6·4	25 29·94	+ 5·9618	−·1425	+ 58	+69 34 24·3	−11·888	− ·695	− 29	4, 6	20·72, 20·37	11640
794	BD + 37° 1870.....	6·0	26 28·57	+ 3·8963	−·0258	− 12	+37 31 5·2	−11·956	− ·451	− 5	5· 4	11·19, 11·21	11641
795	Pi 8h, 78.....	6·7	26 56·29	+ 4·5133	−·0515	+ 22	+53 22 13·4	−11·989	− ·522	− 86	2, 2	19·64, 19·64	2260
796	θ Canc.....	5·8	27 19·40	+ 3·4275	−·0118	− 37	+18 20 57·4	−12·016	− ·395	− 69	4, 5	12·81, 12·17	2265
797	Gr. 1450.....S	6·2	8 28 2·764	+ 3·9148	−·0267	− 90*	+38 16 29·31	−12·066	− ·451	−175*	22, 20	15·39, 13·99	2268
798	BD + 75° 342.....	6·3	28 7·34	+ 7·0492	−·2466	− 39	+74 58 54·7	−12·072	− ·815	− 28	11, 11	19·37, 19·67	11730
799	η Canc.....S	5·7	28 22·456	+ 3·4755	−·0131	− 26*	+20 41 49·23	−12·089	− ·399	− 54*	9, 8	18·06, 17·79	2271
800	32 Lync.....	6·4	28 33·51	+ 3·8666	−·0251	−116	+36 41 31·2	−12·102	− ·444	− 8	3, 3	11·20, 11·20	2272

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			h m s	s	s		° ′ ″	″	″				
801	33 Lync	5·9	8 29 55·08	+ 3·8626	− ·0253	− 23	+36 40 41·2	−12·197	− ·441	− 50	5, 4	11·18, 11·20	2277
802	3 U. Maj	5·8	8 32 33·35	+ 5·3560	− ·1050	− 19	+65 16 53·2	−12·379	− ·608	+ 85	5, 5	13·40, 13·40	2284
803	Pi 8h, 103	7·0	8 33 26·13	+ 4·4729	− ·0524	− 22	+53 11 20·2	−12·439	− ·506	− 39	5, 5	20·18, 20·18	11835
804	Br. 1211	6·3	8 33 38·19	+ 3·7545	− ·0222	− 13	+33 3 52·3	−12·453	− ·423	− 17	4, 4	11·20, 11·17	2294
805	δ Hyda F	4·2	8 33 41·220	+ 3·1822	− ·0066	− 49*	+ 5 57 58·58	−12·457	− ·358	− 11*	8, 20	18·04, 19·59	2295
806	Pi 8h, 105	6·3	8 33 44·83	+ 4·4606	− ·0519	− 26	+52 58 32·2	−12·461	− ·504	− 32	3, 3	14·89, 14·89	2293
807	σ Hyda	4·6	8 34 50·36	+ 3·1385	− ·0057	− 12	+ 3 36 20·1	−12·535	− ·352	− 20	1, 1	12·22, 12·22	2302
808	Br. 1216	7·2	8 35 16·02	+ 3·7489	− ·0223	− 17	+32 59 35·3	−12·564	− ·420	− 47	3, 3	20·54, 20·54	2304
809	Br. 1219	6·5	8 35 39·63	+ 3·7278	− ·0216	− 26	+32 12 29·0	−12·591	− ·417	− 34	5, 5	11·21, 11·21	11886
810	34 Lync	5·6	8 35 50·50	+ 4·1525	− ·0382	+ 28	+46 5 52·7	−12·604	− ·465	+ 77	7, 8	15·03, 14·68	2306
811	40 Canc	6·8	8 35 52·85	+ 3·4559	− ·0133	− 23	+20 14 13·1	−12·607	− ·386	− 17	2, 2	20·70, 20·70	2309
812	Pi 8h, 129	6·8	8 36 3·9	+ 3·4494	− ·0131	− 25	+19 56 10·0	−12·618	− ·385	− 22	0, 2	20·64	2310
813	42 Canc	7·1	8 36 25·05	+ 3·4499	− ·0132	− 12	+19 59 9·3	−12·642	− ·385	− 12	1, 2	21·25, 20·70	2313
814	Br. 1227	7·1	8 36 38·38	+ 3·4468	− ·0131	− 27	+19 50 50·6	−12·658	− ·383	− 16	3, 2	20·88, 20·71	2314
815	BD + 47° 1606	6·3	8 37 47·68	+ 4·1860	− ·0403	− 38	+47 10 16·0	−12·736	− ·466	− 52	6, 6	19·71, 19·71	11965
816	γ Canc S	4·7	8 38 56·497	+ 3·4825	− ·0144	− 73*	+21 44 21·45	−12·814	− ·385	− 50*	13, 10	16·57, 17·28	2327
817	δ Canc F	4·1	8 40 25·542	+ 3·4134	− ·0125	− 12*	+18 25 51·55	−12·913	− ·375	−239*	15, 19	18·55, 18·14	2336
818	46 Canc	6·4	8 40 45·58	+ 3·6854	− ·0210	+ 2	+30 58 12·8	−12·935	− ·405	− 20	1, 1	11·27, 11·09	2338
819	ι Canc S	4·2	8 42 9·783	+ 3·6365	− ·0195	− 15*	+29 2 6·76	−13·029	− ·397	− 50*	14, 11	14·54, 14·45	2348
820	ε Hyda	3·4	8 42 48·59	+ 3·1917	− ·0071	−127	+ 6 41 42·1	−13·071	− ·347	− 54	1, 6	12·18, 12·19	2354
821	Br. 1245	6·5	8 45 53·06	+ 3·7372	− ·0237	− 57	+33 33 59·1	−13·274	− ·403	− 88	4, 3	11·20, 11·20	2364
822	35 Lync	5·2	8 46 55·25	+ 4·0361	− ·0362	+ 1	+44 0 24·6	−13·342	− ·433	+ 37	4, 4	13·45, 13·45	2368
823	BD + 45° 1649	6·2	8 47 6·16	+ 4·0903	− ·0388	− 24	+45 35 42·3	−13·354	− ·439	− 44	5, 5	20·59, 20·59	12226
824	Gr. 1476	6·7	8 47 12·80	+ 3·9788	− ·0338	− 32	+42 17 9·4	−13·361	− ·426	− 78	5, 4	18·82, 20·73	12228
825	BD + 36° 1883	6·1	8 49 12·63	+ 3·7862	− ·0262	− 18	+35 49 22·3	−13·491	− ·402	− 28	6, 6	16·24, 16·16	12272
826	57 Canc	5·6	8 49 40·36	+ 3·6624	− ·0215	+ 30	+30 51 53·5	−13·521	− ·388	− 33	2, 1	11·15, 11·09	2384
827	ζ Hyda F	3·2	8 51 25·845	+ 3·1798	− ·0070	− 69*	+ 6 13 54·96	−13·634	− ·334	+ 9*	2, 7	18·22, 18·35	2393
828	Gr. 1487	5·8	8 51 38·83	+ 3·9084	− ·0318	− 72	+40 29 23·8	−13·648	− ·412	− 54	5, 5	16·98, 21·34	12341
829	Pi 8h, 202	6·1	8 51 45·76	+ 4·0830	− ·0398	−105	+45 55 14·5	−13·656	− ·430	− 46	4, 3	21·16, 20·84	2392
830	59 Canc	5·7	8 52 19·29	+ 3·7115	− ·0238	− 45	+33 11 59·7	−13·691	− ·389	− 81	2, 2	11·22, 11·22	2398
831	63 Canc	5·9	8 53 24·05	+ 3·3491	− ·0116	+ 42	+15 52 13·5	−13·760	− ·349	+ 22	3, 2	20·56, 21·23	2402
832	61 Canc	6·5	8 53 25·51	+ 3·6456	− ·0215	+ 53	+30 31 22·3	−13·761	− ·380	+ 12	3, 2	14·41, 20·68	2401
833	ι U. Maj S	3·1	8 54 4·879	+ 4·1618	− ·0446	−438*	+48 20 14·39	−13·803	− ·434	−248*	12, 12	19·46, 19·62	2404
834	α Canc F	4·4	8 54 23·236	+ 3·2811	− ·0098	+ 25*	+12 8 56·47	−13·822	− ·341	− 39*	7, 33	16·21, 16·67	2407
835	64 Canc	5·6	8 54 56·65	+ 3·6929	− ·0235	+ 33	+32 42 40·2	−13·858	− ·382	− 48	3, 4	12·15, 11·88	2409
836	Pi 8h, 224	6·7	8 54 56·81	+ 3·3945	− ·0132	− 29	+18 25 40·7	−13·858	− ·351	− 79	2, 2	21·68, 21·68	2410
837	Gr. 1496	6·5	8 55 45·05	+ 3·8218	− ·0289	− 4	+37 53 49·8	−13·909	− ·395	− 6	5, 4	16·98, 20·46	12432
838	10 U. Maj S	4·0	8 55 46·679	+ 3·9416	− ·0343	−388*	+42 4 50·80	−13·910	− ·408	−260*	9, 9	16·77, 16·78	2413
839	67 Canc	6·3	8 57 20·89	+ 3·5853	− ·0198	− 44	+28 11 56·4	−14·009	− ·367	− 88	3, 3	20·18, 20·18	2419
840	ν Canc	5·6	8 58 21·34	+ 3·5115	− ·0172	0	+24 44 56·7	−14·072	− ·359	− 5	1, 1	12·22, 12·22	2426
841	Gr. 1501	5·9	8 58 21·36	+ 4·4100	− ·0604	+ 4	+54 34 50·7	−14·082	− ·452	− 2	7, 7	14·75, 14·30	2423
842	κ U. Maj S	3·6	8 58 30·801	+ 4·1090	− ·0434	− 30*	+47 27 15·71	−14·082	− ·420	− 66*	14, 15	15·27, 15·46	2424
843	Pi 8h, 245	4·8	9 1 45·94	+ 3·8254	− ·0304	− 30	+38 45 9·9	−14·282	− ·385	− 25	9, 7	11·56, 11·48	2437
844	ω Hyda	5·5	9 2 1·57	+ 3·1612	− ·0068	− 14	+ 5 23 34·7	−14·298	− ·317	− 3	1, 2	12·24, 12·20	2439
845	τ Canc	5·7	9 3 30·18	+ 3·6090	− ·0215	− 20	+29 57 24·2	−14·389	− ·360	− 9	4, 5	11·93, 12·34	2444
846	κ Canc F	5·3	9 3 41·206	+ 3·2530	− ·0094	− 13*	+10 58 15·57	−14·400	− ·324	− 11*	13, 30	19·69, 20·02	2445
847	13 U. Maj	5·0	9 3 48·96	+ 5·3091	− ·1324	− 9	+67 26 25·7	−14·408	− ·532	− 70	9, 7	15·00, 14·94	1441
848	Pi 8h, 254	6·5	9 4 15·33	+ 3·7027	− ·0255	−148	+34 11 18·2	−14·434	− ·368	−126	5, 4	18·65, 20·48	12613
849	λ U. Maj	4·8	9 4 45·14	+ 4·9546	− ·1030	+153	+63 49 12·5	−14·465	− ·494	− 69	4, 4	14·19, 14·19	2446
850	ξ Canc	5·3	9 5 3·04	+ 3·4526	− ·0158	+ 3	+22 20 59·3	−14·483	− ·342	− 7	7, 5	13·06, 13·01	2449

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			h m s	s	s		° ′ ″	″	″				
851	79 Canc.	6·3	9 6 2·51	+ 3·4500	− ·0159	+ 6	+22 18 7·4	−14·542	− ·340	− 5	2, 2	20·62, 20·62	2455
852	BD + 31° 1946	6·5	9 6 7·19	+ 3·6311	− ·0228	− 15	+31 16 10·9	−14·547	− ·358	− 40	4, 4	11·20, 11·20	12657
853	36 Lync.	5·4	9 8 54·33	+ 3·9348	− ·0375	− 21	+43 31 40·6	−14·714	− ·383	− 47	10, 9	12·22, 11·77	2465
854	θ Hyda. F	4·0	9 10 27·828	+ 3·1142	− ·0057	+ 87*	+ 2 37 53·59	−14·806	− ·300	−312*	19, 60	18·79, 17·95	2479
855	Br. 1300	6·2	9 10 38·52	+ 3·7017	− ·0267	−118	+34 56 38	−14·816	− ·357	+ 34	5, 0	11·23	2478
856	Pi 9h, 19	6·2	9 12 29·72	+ 4·0338	− ·0439	+ 20	+47 7 51·3	−14·925	− ·386	+ 8	3, 3	20·22, 20·22	2484
857	BD + 35° 1971	5·9	9 13 48·86	+ 3·7092	− ·0276	− 37	+35 40 45·2	−15·001	− ·352	− 36	1, 1	11·18, 11·18	2494
858	38 Lync.	3·9	9 14 11·00	+ 3·7424	− ·0292	− 21	+37 7 16·0	−15·023	− ·355	−135	3, 6	12·52, 12·65	2495
859	83 Canc. S	6·9	9 14 47·866	+ 3·3598	− ·0134	− 81*	+18 1 26·96	−15·059	− ·317	−138*	10, 11	21·01, 21·04	2501
860	Gr. 1534	6·0	9 16 13·72	+ 4·4222	− ·0704	− 10	+57 1 5·6	−15·141	− ·416	− 13	5, 6	20·60, 19·66	12883
861	Gr. 1538	6·7	9 16 17·76	+ 3·7693	− ·0310	− 36	+38 30 23·6	−15·145	− ·354	− 19	5, 5	19·23, 21·04	12875
862	Gr. 1536	7·1	9 16 27·15	+ 3·9688	− ·0416	− 4	+45 41 21·1	−15·154	− ·372	− 32	7, 7	21·50, 21·50	12885
863	α Lync. S	3·3	9 16 29·502	+ 3·6786	− ·0266	−176*	+34 42 37·83	−15·156	− ·344	+ 10*	10, 10	12·40, 12·40	2507
864	BD + 33° 1848	6·8	9 16 54·50	+ 3·6444	− ·0251	+ 11	+33 13 17·0	−15·180	− ·340	− 41	5, 5	16·84, 16·84	12892
865	Br. 1318	6·7	9 19 11·69	+ 3·4843	− ·0185	− 92	+25 30 15·6	−15·310	− ·322	− 3	4, 3	20·72, 20·89	12940
866	Pi 9h, 51	6·5	9 19 43·02	+ 4·8574	− ·1078	− 12	+64 15 52·9	−15·339	− ·449	− 45	5, 5	20·45, 20·45	12970
867	BD + 75° 377	6·3	9 20 1·67	+ 6·3752	− ·2830	− 66	+75 25 20·3	−15·357	− ·591	+ 27	9, 9	19·25, 18·76	12988
868	κ Leon.	4·7	9 20 17·44	+ 3·5005	− ·0193	− 23	+26 30 22·5	−15·371	− ·321	− 53	4, 5	14·22, 14·22	2524
869	α Hyda. F	2·0	9 23 54·146	+ 2·9495	− ·0013	− 11*	− 8 19 58·38	−15·572	− ·264	+ 31*	12, 26	20·88, 19·32	2533
870	h U. Maj. S	3·6	9 25 38·234	+ 4·7367	− ·1022	+170*	+63 23 27·34	−15·667	− ·424	+ 25*	10, 10	20·33, 20·34	2540
871	7 L. Min.	6·1	9 26 11·61	+ 3·6330	− ·0262	− 6	+33 59 10·5	−15·698	− ·323	− 65	2, 2	11·18, 11·12	2543
872	8 L. Min.	5·6	9 26 29·01	+ 3·6615	− ·0278	− 47	+35 26 9·3	−15·740	− ·323	−117	2, 2	11·23, 11·23	2546
873	1. H. Drac. P	4·6	9 26 31·653	+ 8·7309	− ·7548	− 44*	+81 39 35·79	−15·716	− ·784	− 25*	149, 100	17·04, 16·01	2536
874	22 U. Maj.	6·0	9 27 26·25	+ 5·6906	− ·2078	+175	+72 32 24·0	−15·787	− ·503	− 69	4, 4	20·98, 20·98	2547
875	θ U. Maj. S	3·2	9 27 51·089	+ 4·1275	− ·0557	−1025*	+52 1 12·12	−15·788	− ·364	−547*	10, 9	20·71, 21·32	2552
876	d U. Maj. S	4·7	9 27 52·965	+ 5·3547	− ·1674	−112*	+70 9 40·29	−15·789	− ·474	+ 70*	19, 23	21·60, 21·63	2549
877	ξ Leon.	5·2	9 27 54·39	+ 3·2423	− ·0099	− 65	+11 37 58·5	−15·790	− ·284	− 87	1, 1	11·30, 11·30	2555
878	9 L. Min.	6·6	9 28 54·5	+ 3·6856	− ·0295	+ 32	+36 49 13·8	−15·844	− ·322	− 45	0, 2	19·74	2561
879	10 L. Min. S	4·8	9 29 38·077	+ 3·6811	− ·0293	+ 11*	+36 43 52·91	−15·883	− ·320	− 27*	14, 11	13·74, 13·14	2566
880	26 U. Maj.	4·7	9 29 41·82	+ 4·1304	− ·0567	− 63	+52 23 9·0	−15·886	− ·360	− 44	3, 3	20·57, 20·57	2567
881	BD + 24° 2104	6·7	9 29 42·47	+ 3·4320	− ·0174	− 36	+23 47 20·5	−15·887	− ·298	− 93	4, 3	19·76, 19·95	13199
882	Pi 9h, 115	5·0	9 30 23·65	+ 3·7529	− ·0333	− 27	+39 57 18·9	−15·924	− ·325	0	4, 4	12·22, 12·22	2570
883	33 Hyda.	5·9	9 30 48·12	+ 2·9937	− ·0022	0	− 5 34 44·8	−15·945	− ·258	− 57	3, 2	12·19, 12·20	2572
884	11 L. Min.	5·6	9 31 10·76	+ 3·6632	− ·0287	−582	+36 9 4·1	−15·963	− ·316	−265	5, 4	12·99, 13·43	2573
885	Pi 9h, 124	5·8	9 32 16·12	+ 3·5648	− ·0239	+ 10	+31 29 55·9	−16·023	− ·306	− 42	3, 3	11·22, 11·22	2578
886	10 Leon.	5·4	9 33 15·23	+ 3·1733	− ·0076	− 44	+ 7 10 21·0	−16·074	− ·270	− 7	3, 1	12·16, 12·03	2582
887	BD + 67° 602	6·3	9 33 16·22	+ 5·0106	− ·1366	− 13	+67 36 40·4	−16·075	− ·430	− 45	8, 8	20·00, 20·00	13304
888	42 Lync.	5·4	9 33 41·22	+ 3·7548	− ·0343	− 17	+40 34 38·3	−16·096	− ·319	− 7	4, 4	11·24, 11·24	2584
889	2 Sext.	4·9	9 34 32·81	+ 3·1420	− ·0066	−110	+ 4 59 19·5	−16·141	− ·265	− 63	1, 1	12·27, 12·27	2589
890	Gr. 1564	6·0	9 35 51·46	+ 5·1844	− ·1592	−115	+69 34 47·7	−16·209	− ·438	− 71	2, 2	15·22, 15·22	2591
891	ι Hyda. F	4·1	9 36 1·602	+ 3·0618	− ·0040	+ 31*	− 0 48 6·01	−16·218	− ·255	− 72*	5, 13	21·22, 20·22	2595
892	Pi 9h, 112	6·4	9 37 4·74	+ 6·9013	− ·4212	+ 17	+78 28 41·2	−16·272	− ·581	− 3	10, 10	20·84, 20·84	13392
893	o Leon. F	3·7	9 37 9·001	+ 3·2136	− ·0091	− 98*	+10 14 3·44	−16·275	− ·266	− 39*	9, 44	19·01, 16·40	2602
894	BD + 31° 2026	6·1	9 37 9·20	+ 3·5530	− ·0242	+ 24	+31 37 9·9	−16·276	− ·296	− 7	5, 4	14·81, 15·68	13369
895	13 Leon.	6·5	9 37 19·81	+ 3·4571	− ·0195	− 9	+26 15 18·4	−16·285	− ·287	− 47	2, 2	20·72, 20·72	2603
896	43 Lync.	5·6	9 37 22·01	+ 3·7288	− ·0337	− 51	+40 6 2·1	−16·286	− ·310	− 49	2, 2	11·18, 11·18	2601
897	13 L. Min.	6·6	9 38 11·88	+ 3·6244	− ·0280	− 12	+35 26 13·0	−16·329	− ·300	− 55	5, 5	13·23, 13·23	13388
898	Gr. 1562	6·3	9 38 29·30	+ 7·2400	− ·4929	− 60	+79 28 55·8	−16·344	− ·604	− 24	6, 7	19·10, 19·35	2598
899	BD + 65° 731	6·2	9 38 43·92	+ 4·7545	− ·1162	− 79	+65 19 38·6	−16·356	− ·394	+ 9	5, 6	20·86, 20·91	13408
900	f Leon.	5·8	9 39 9·78	+ 3·5233	− ·0230	− 21	+30 19 13·6	−16·378	− ·289	−109	4, 4	11·97, 11·97	2608

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			h m s	s	s		° ′ ″						
901	Br. 1364	5·4	9 41 13·77	+ 4·2654	− ·0732	+ 5	+57 28 23·4	−16·481	− ·346	+ 25	4, 4	12·72, 12·72	2614
902	ε Leon. S	3·1	41 35·891	+ 3·4126	− ·0178	− 30*	+24 7 13·14	−16·500	− ·275	− 24*	15, 16	17·01, 17·26	2618
903	15 L. Min.	5·3	42 45·44	+ 3·8579	− ·0437	+212	+46 22 17·4	−16·606	− ·308	− 99	3, 5	14·54, 14·03	2626
904	Gr. 1579	6·3	44 32·10	+ 4·7411	− ·1207	− 86	+65 56 36·9	−16·644	− ·378	− 32	5, 5	19·83, 19·83	13519
905	16 L. Min.	7·0	45 37·83	+ 3·6928	− ·0336	+ 12	+39 58 53·6	−16·697	− ·291	− 7	5, 6	20·85, 20·76	2633
906	20 Leon.	6·2	9 45 38·44	+ 3·3645	− ·0159	− 31	+21 31 46·8	−16·697	− ·263	− 23	3, 3	19·91, 19·91	2634
907	ν U. Maj. S	3·8	45 40·346	+ 4·3223	− ·0809	−379*	+59 23 33·20	−16·699	− ·341	−158*	11, 12	16·15, 16·91	2632
908	6 Sext.	6·2	47 27·3	+ 3·0231	− ·0024	+ 9	− 3 53 27·9	−16·785	− ·234	− 30	0, 10	12·22	2641
909	17 L. Min.	7·0	47 49·31	+ 3·6476	− ·0315	− 44	+38 16 1·5	−16·802	− ·282	− 30	6, 7	20·75, 20·68	2644
910	μ Leon. S	4·1	48 30·171	+ 3·4322	− ·0195	−163*	+26 21 39·00	−16·835	− ·264	− 63*	20, 19	14·25, 14·35	2648
911	Gr. 1585	6·7	9 49 36·04	+ 4·3972	− ·0908	+ 9	+61 28 14·6	−16·887	− ·338	− 4	5, 6	17·83, 17·91	13613
912	Pi 9h, 187	6·2	51 43·15	+ 5·4284	− ·2178	−148	+73 14 13·9	−16·986	− ·413	− 47	8, 7	15·12, 12·17	2656
913	Pi 9h, 201	6·2	52 0·57	+ 4·1962	− ·0741	+ 34	+57 46 34·1	−16·999	− ·317	− 62	6, 6	19·93, 19·93	2660
914	83 B. Leon.	6·2	52 27·51	+ 3·1883	− ·0084	− 61	+ 9 17 21·9	−17·020	− ·239	+ 7	6, 6	12·25, 12·25	2663
915	19 L. Min.	5·2	53 6·00	+ 3·6926	− ·0357	−102	+41 24 48·2	−17·050	− ·276	− 37	9, 10	13·13, 13·62	2665
916	Gr. 1591	7·0	9 53 13·41	+ 3·7941	− ·0426	+ 4	+45 46 21·1	−17·055	− ·283	− 38	5, 4	19·83, 19·99	13704
917	ν Leon.	5·5	54 11·50	+ 3·2313	− ·0104	− 21	+12 48 11·5	−17·100	− ·238	− 29	5, 5	11·47, 11·61	2672
918	Gr. 1594	5·8	54 42·78	+ 4·1496	− ·0716	− 39	+57 10 17·9	−17·123	− ·307	− 43	5, 5	14·66, 14·66	2673
919	Pi 9h, 221	6·0	55 17·09	+ 3·4723	− ·0226	− 77	+30 0 18·6	−17·149	− ·255	− 50	3, 3	11·21, 11·21	2675
920	12 Sext.	6·9	55 49·72	+ 3·1179	− ·0056	− 50	+ 3 44 34·5	−17·174	− ·227	+ 11	1, 1	12·30, 12·27	2678
921	π Leon. F	5·0	9 56 15·101	+ 3·1743	− ·0080	− 23*	+ 8 24 16·92	−17·193	− ·231	− 27*	12, 47	20·17, 18·27	2680
922	20 L. Min.	5·8	56 42·08	+ 3·5056	− ·0248	−409	+32 17 41·0	−17·213	− ·255	−440	7, 7	12·38, 12·38	2681
923	BD + 84° 225	6·5	56 48·89	+ 9·9058	−1·4024	− 31	+84 16 56·2	−17·218	− ·732	+ 4	11, 11	20·63, 20·63	13814
924	Pi 9h, 230	5·8	58 38·28	+ 3·3498	− ·0164	− 13	+22 18 41·9	−17·299	− ·239	− 19	5, 6	19·87, 19·76	2682
925	Pi 9h, 229	6·0	59 37·96	+ 4·0037	− ·0618	− 17	+54 15 19·5	−17·343	− ·285	− 11	4, 4	20·02, 20·02	2684
926	BD + 53° 1384	6·4	10 0 15·93	+ 3·9493	− ·0575	− 4	+52 44 7·3	−17·371	− ·280	− 28	8, 8	15·12, 15·12	13842
927	21 L. Min.	4·5	3 0·65	+ 3·5404	− ·0282	+ 44	+35 36 40·3	−17·490	− ·246	− 6	6, 6	12·43, 12·43	2692
928	η Leon. F	3·5	3 14·796	+ 3·2737	− ·0128	− 1*	+17 7 44·40	−17·500	− ·225	− 12*	17, 41	19·01, 18·35	2694
929	Pi 9h, 246	6·5	3 56·30	+ 3·4774	− ·0244	− 64	+31 58 22·6	−17·529	− ·238	− 88	7, 7	16·55, 16·55	13917
930	α Leon. F	1·2	4 22·796	+ 3·2140	− ·0100	−169*	+12 20 3·69	−17·548	− ·219	− 3*	9, 22	19·36, 16·36	2698
931	Pi 9h, 254	6·7	10 6 28·09	+ 3·6256	− ·0349	− 11	+41 1 51·8	−17·635	− ·244	− 12	9, 7	13·40, 13·99	2701
932	Gr. 1619	6·0	6 46·49	+ 3·5638	− ·0307	− 24	+37 46 19·5	−17·648	− ·239	− 33	8, 8	15·77, 15·77	13985
933	λ Hyda F	3·8	6 55·913	+ 2·9385	+ ·0016	−137*	−11 58 58·27	−17·654	− ·195	− 93*	9, 22	20·71, 20·12	2706
934	BD + 27° 1862	6·5	9 35·79	+ 3·3952	− ·0203	− 12	+27 30 28·0	−17·764	− ·222	− 3	5, .5	19·85, 19·85	14037
935	Gr. 1623	6·2	9 58·05	+ 4·1573	− ·0832	+ 20	+60 21 28·4	−17·779	− ·272	− 5	6, 7	12·57, 12·53	14054
936	Pi 10h, 10	6·7	10 10 22·34	+ 3·3156	− ·0157	−101	+21 32 31·9	−17·795	− ·215	− 88	6, 5	20·09, 20·05	14056
937	22 L. Min.	6·8	10 48·22	+ 3·4535	− ·0241	− 34	+31 50 28·1	−17·812	− ·223	− 18	3, 3	19,93, 19·93	2720
938	BD + 71° 534 pr.	6·1	11 49·83	+ 4·8819	− ·1766	− 61	+71 26 9·9	−17·853	− ·316	− 50	11, 11	19·66, 19·43	14101
939	BD + 26° 2064	6·2	12 30·73	+ 3·3641	− ·0188	− 78	+25 44 41·1	−17·880	− ·214	+ 24	5, 5	19·87, 19·87	14106
940	ζ Leon. S	3·4	12 31·362	+ 3·3391	− ·0173	+ 16*	+23 47 29·32	−17·881	− ·212	− 15*	12, 14	20·52, 20·53	2730
941	λ U. Maj. S	3·4	10 12 34·865	+ 3·6414	− ·0380	−149*	+43 17 22·13	−17·883	− ·232	− 45*	19, 18	13·36, 13·52	2729
942	32 U. Maj.	5·9	12 36·60	+ 4·3961	− ·1127	−144	+65 28 59·3	−17·884	− ·282	− 13	4, 4	13·78, 13·78	2726
943	22 Sext. F	5·5	13 54·202	+ 2·9922	+ ·0001	−108*	− 7 41 37·91	−17·935	− ·187	+ 2*	5, 10	20·86, 21·06	2735
944	BD + 47° 1761	6·2	14 21·86	+ 3·7133	− ·0444	− 21	+47 8 14·2	−17·953	− ·233	− 38	6, 6	20·60, 20·60	14145
945	BD + 49° 1940	6·2	14 47·85	+ 3·7486	− ·0476	− 97	+48 46 31·1	−17·970	− ·234	−128	6, 7	19·91, 19·67	14154
946	BD + 25° 2231	6·7	10 14 50·27	+ 3·3499	− ·0182	− 33	+25 5 16·6	−17·971	− ·209	− 13	5, 5	20·82, 20·82	14151
947	Gr. 1638	5·1	15 40·73	+ 3·8993	− ·0616	− 19	+54 35 38·3	−18·004	− ·242	− 16	3, 3	18·97, 18·97	2740
948	Pi 10h, 26	6·0	17 21·90	+ 4·6176	− ·1449	− 96	+69 7 32·2	−17·991	− ·289	− 41	4, 4	15·26, 15·26	2737
949	Gr. 1433	6·0	17 43·59	+ 3·5851	− ·0353	−109	+41 36 40·6	−18·082	− ·218	−150	2, 2	16·28, 16·28	2750
950	μ U. Maj. S	3·1	17 52·097	+ 3·5892	− ·0357	− 73*	+41 52 38·01	−18·087	− ·218	+ 20*	10, 10	18·25, 18·25	2751

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			h m s	s	s		° ′						
951	30H U. Maj. S	5·0	10 18 44·664	+ 4·3529	− ·1146	− 18*	+65 56 46·88	−18·120	− ·264	− 23*	12, 11	21·03, 21·01	2754
952	29H Caml. P	5·6	18 59·919	+ 9·1424	−1·4295	−880*	+84 38 4·53	−18·129	− ·561	− 40*	119, 84	17·05, 16·15	2745
953	Pi 10h, 53	6·5	19 27·43	+ 3·4005	− ·0222	− 4	+29 59 44·6	−18·146	− ·203	− 16	4, 6	21·28, 21·29	14266
954	28 L. Min.	5·9	19 50·26	+ 3·4557	− ·0262	− 8	+34 5 55·0	−18·161	− ·206	− 28	3, 3	18·29, 18·29	2761
955	30 L. Min.	4·9	10 21 37·21	+ 3·4504	− ·0262	− 54	+34 10 43·0	−18·226	− ·201	− 83	3, 3	19·95, 19·95	14315
956	30H Caml. P	5·3	22 5·060	+ 7·5445	− ·8633	−440*	+82 56 28·61	−18·243	− ·448	+ 25*	82, 41	18·19, 17·94	2762
957	Pi 10h, 70	6·2	23 1·91	+ 3·5666	− ·0356	− 46	+41 59 6·0	−18·277	− ·205	− 88	4, 4	20·77, 20·77	2773
958	β L. Min. S	4·4	23 33·152	+ 3·4856	− ·0293	− 99*	+37 5 31·57	−18·296	− ·200	−110*	10, 10	15·68, 15·68	2776
959	BD + 45° 1832	6·8	24 5·78	+ 3·6272	− ·0411	− 24	+45 35 45·0	−18·315	− ·207	− 30	5, 6	20·07, 20·11	14377
960	BD + 64° 789	6·0	10 25 14·66	+ 4·2057	− ·1036	− 86	+64 38 34·6	−18·356	− ·239	− 56	5, 7	13·05, 12·83	14404
961	32 L. Min.	6·0	25 44·19	+ 3·5102	− ·0319	− 9	+39 18 34·4	−18·373	− ·196	− 4	7, 7	13·98, 13·98	2787
962	36 U. Maj.	5·0	25 50·58	+ 3·8751	− ·0659	−214	+56 21 56·9	−18·376	− ·218	− 38	8, 7	14·62, 14·96	2785
963	33 L. Min.	6·1	27 36·17	+ 3·4102	− ·0245	+ 10	+32 45 51·9	−18·437	− ·187	− 8	2, 2	11·29, 11·29	2798
964	Gr. 1658	4·9	27 51·88	+ 3·5197	− ·0337	−125	+40 48 42·8	−18·481	− ·191	− 7	5, 5	15·06, 15·06	2802
965	9H Drac. S	5·0	28 45·951	+ 5·1660	− ·2665	− 79*	+76 5 59·79	−18·477	− ·284	− 10*	23, 23	19·70, 19·70	2799
966	ρ Leon. F	3·8	10 28 51·837	+ 3·1612	− ·0078	− 5*	+ 9 41 34·94	−18·481	− ·170	− 6*	11, 45	19·10, 17·70	2804
967	34 L. Min.	5·8	29 13·94	+ 3·4388	− ·0272	− 28	+35 22 31·5	−18·493	− ·186	− 21	2, 2	11·28, 11·28	2808
968	37 U. Maj. S	5·2	30 20·605	+ 3·8717	− ·0688	+ 83*	+57 28 10·10	−18·530	− ·207	+ 31*	11, 10	20·00, 19·37	2813
969	48 Leon.	5·4	30 53·46	+ 3·1381	− ·0064	− 72	+ 7 20 24·8	−18·548	− ·166	+ 52	2, 1	12·26, 12·30	2816
970	35 L. Min.	6·5	32 3·50	+ 3·4459	− ·0286	+ 22	+36 42 58·5	−18·588	− ·181	− 43	7, 7	16·71, 16·71	2819
971	Gr. 1668	5·8	10 34 27·28	+ 3·7451	− ·0580	− 98	+54 3 38·0	−18·664	− ·191	− 81	5, 4	12·88, 13·04	2828
972	37 L. Min.	4·9	34 30·28	+ 3·3815	− ·0238	+ 5	+32 21 58·1	−18·666	− ·172	− 3	6, 6	12·45, 12·45	2829
973	38 L. Min.	6·0	34 50·90	+ 3·4559	− ·0302	−188	+38 18 5·4	−18·677	− ·175	− 46	7, 7	12·44, 12·44	2831
974	39 L. Min.	7·3	36 12·23	+ 3·3259	− ·0198	0	+27 55 0·1	−18·720	− ·165	− 13	5, 5	20·64, 20·64	2839
975	38 U. Maj.	5·2	36 51·13	+ 4·1435	− ·1098	−266	+66 6 35·9	−18·740	− ·207	− 73	3, 3	14·86, 14·86	2841
976	33 Sext.	6·8	10 37 35·41	+ 3·0671	− ·0018	− 94	− 1 20 48·0	−18·763	− ·149	−129	1, 14	12·30, 12·29	2846
977	35H U. Maj.	5·3	37 43·39	+ 4·3265	− ·1385	− 14	+69 28 8·7	−18·767	− ·214	− 22	4, 4	13·54, 13·54	2844
978	Pi 10h, 131	6·5	37 59·47	+ 3·3663	− ·0234	0	+32 5 22·4	−18·775	− ·164	− 30	3, 3	11·27, 11·26	2847
979	40 L. Min.	5·6	38 55·11	+ 3·3059	− ·0186	− 79	+26 43 11·9	−18·803	− ·158	− 65	6, 6	14·39, 14·39	2852
980	BD + 68° 617	6·3	39 52·68	+ 4·1946	− ·1218	+ 5	+67 48 19·2	−18·832	− ·201	− 3	6, 6	20·27, 20·27	14761
981	39 U. Maj.	5·9	10 39 59·91	+ 3·8015	− ·0677	+ 21	+57 35 37·0	−18·805	− ·183	− 57	4, 4	20·76, 20·76	2850
982	BD + 20° 2514	6·2	40 12·57	+ 3·2400	− ·0138	− 81	+20 9 11·0	−18·842	− ·153	− 33	5, 6	20·28, 20·28	14760
983	41 U. Maj.	6·7	41 41·12	+ 3·7829	− ·0677	− 58	+57 45 43·4	−18·885	− ·176	− 67	4, 4	20·02, 20·02	2865
984	42 L. Min. S	5·4	41 41·949	+ 3·3427	− ·0223	− 20*	+31 4 39·78	−18·886	− ·155	− 41*	32, 31	14·32, 14·12	2866
985	37 Sext.	6·6	42 11·44	+ 3·1256	− ·0057	− 5	+ 6 46 8·4	−18·901	− ·144	− 38	5, 5	12·31, 12·31	2868
986	m Leon.	5·9	10 42 22·25	+ 3·2282	− ·0131	+ 62	+19 17 14·9	−18·906	− ·148	− 48	4, 4	18·77, 18·77	2869
987	BD + 65° 803	6·2	43 50·33	+ 4·0307	− ·1032	+ 13	+65 31 42·3	−18·948	− ·184	− 3	5, 5	20·27, 20·27	14865
988	l Leon. F	5·5	45 19·003	+ 3·1555	− ·0079	− 1*	+10 56 33·15	−18·990	− ·139	− 33*	17, 61	19·17, 17·31	2883
989	43 U. Maj.	6·0	46 34·38	+ 3·7203	− ·0643	− 85	+56 58 47·2	−19·025	− ·162	− 3	3, 4	20·60, 20·52	2890
990	Pi 10h, 170	7·0	48 0·96	+ 3·6199	− ·0532	− 10	+52 57 51·9	−19·064	− ·155	− 21	4, 4	20·03, 20·03	2895
991	Pi 10h, 171	6·8	10 48 2·66	+ 3·6186	− ·0531	− 72	+52 54 11·0	−19·065	− ·155	− 62	2, 2	18·30, 18·30	2896
992	Gr. 1697	6·3	48 25·10	+ 4·2166	− ·1406	−784	+70 15 19·6	−19·075	− ·180	− 70	1, 1	12·31, 12·31	2897
993	46 L. Min. S	3·9	49 7·353	+ 3·3536	− ·0253	+ 74*	+34 37 10·59	−19·094	− ·141	−290*	33, 29	14·53, 14·39	2899
994	ω U. Maj.	4·9	49 40·10	+ 3·4570	− ·0359	+ 42	+43 35 22·9	−19·108	− ·144	− 35	7, 6	13·27, 13·58	2900
995	47 L. Min.	5·9	50 48·44	+ 3·3452	− ·0250	+ 48	+34 26 7·6	−19·139	− ·137	− 68	1, 1	11·29, 11·29	2907
996	54 Leon.	4·5	10 51 33·43	+ 3·2574	− ·0169	− 55	+25 9 1·0	−19·157	− ·130	− 17	4, 4	13·26, 13·26	2909
997	Br. 1514	5·2	51 35·53	+ 3·3370	− ·0243	− 84	+33 54 27·6	−19·158	− ·134	− 45	6, 6	17·61, 17·61	2910
998	Pi 10h, 191	6·3	51 58·11	+ 3·4298	− ·0342	+ 10	+42 24 39·1	−19·168	− ·139	−100	7, 6	16·72, 17·62	2912
999	BD + 23° 2279	6·2	52 14·78	+ 3·2360	− ·0151	− 19	+22 45 7·1	−19·175	− ·129	+ 3	5, 6	19·88, 19·95	15035
1000	50 L. Min.	7·0	52 30·44	+ 3·2611	− ·0174	− 18	+25 54 3·9	−19·182	− ·130	− 20	6, 6	20·30, 20·30	15039

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			h m s	s	s		° ′ ″	″	″				
1001	Br. 1508	6·5	10 54 0·62	+ 4·8851	− ·3005	−247	+78 10 20·5	−19·219	− ·194	− 27	11, 13	13·47, 13·39	2918
1002	BD + 52° 1528	6·4	10 54 52·65	+ 3·5572	− ·0506	− 11	+52 17 4·1	−19·241	− ·137	− 4	6, 6	20·29, 20·29	15082
1003	47 U. Maj	5·3	10 55 16·71	+ 3·3946	− ·0317	−280	+40 49 51·1	−19·250	− ·130	+ 50	9, 7	12·13, 12·27	2920
1004	Pi 10h, 203	6·4	10 55 22·00	+ 3·3480	− ·0267	+ 64	+36 29 46·8	−19·253	− ·128	− 56	5, 5	18·67, 18·67	2921
1005	Gr. 1722	5·7	10 55 56·68	+ 3·4535	− ·0388	+ 14	+45 55 43·2	−19·267	− ·131	+ 5	6, 6	14·28, 14·28	2922
1006	Gr. 1719	6·3	10 56 22·39	+ 3·8180	− ·0887	− 62	+63 49 29·8	−19·277	− ·144	− 52	5, 5	20·48, 20·48	15122
1007	49 U. Maj	5·2	10 56 38·69	+ 3·3746	− ·0301	− 57	+39 36 54·9	−19·284	− ·126	− 31	5, 5	12·29, 12·29	9226
1008	*d* Leon F	5·1	10 56 41·288	+ 3·0984	− ·0036	+ 6*	+ 4 1 13·99	−19·285	− ·115	− 21*	11, 26	19·02, 19·49	2927
1009	β U. Maj S	2·2	10 57 19·643	+ 3·6240	− ·0614	+102*	+56 47 5·72	−19·300	− ·134	+ 28*	14, 13	17·48, 17·91	2930
1010	Gr. 1727	6·7	10 58 25·55	+ 4·0711	− ·1355	+ 6	+70 26 7·0	−19·326	− ·149	− 34	9, 9	17·90, 17·90	15177
1011	α U. Maj S	1·7	10 59 6·827	+ 3·7370	− ·0798	−168*	+62 9 22·86	−19·342	− ·135	− 74*	15, 11	15·49, 17·46	2933
1012	51 U. Maj	6·1	11 0 21·46	+ 3·3477	− ·0286	− 61	+38 38 43·8	−19·370	− ·117	− 5	7, 6	11·29, 11·29	2940
1013	χ Leon F	4·7	11 1 8·971	+ 3·1189	− ·0054	−233*	+ 7 44 30·57	−19·387	− ·107	− 47*	22, 64	19·70, 17·82	2942
1014	65 Leon	5·8	11 3 5·09	+ 3·0864	− ·0026	−251	+ 2 21 48·9	−19·430	− ·102	− 87	1, 1	12·33, 12·33	2950
1015	64 Leon	6·7	11 3 39·02	+ 3·2158	− ·0152	− 2	+23 43 45·9	−19·442	− ·106	− 3	4, 4	20·03, 20·03	2951
1016	BD + 68° 632	6·1	11 4 55·62	+ 3·8448	− ·1073	−149	+67 37 1·7	−19·469	− ·125	− 28	5, 5	13·04, 13·04	15332
1017	Pi 10h, 252	5·7	11 5 11·95	+ 3·3089	− ·0262	− 38	+36 42 59·4	−19·474	− ·106	− 30	6, 6	18·45, 18·45	15334
1018	Pi 10h, 254	6·9	11 5 26·96	+ 3·3730	− ·0343	− 60	+43 36 52·5	−19·480	− ·108	− 18	9, 9	17·53, 17·53	15339
1019	ψ U. Maj S	3·0	11 5 27·228	+ 3·3868	− ·0361	− 55*	+44 54 20·93	−19·480	− ·108	− 38*	20, 20	14·69, 14·86	2958
1020	B.A.C. 3821	6·4	11 7 24·74	+ 3·8515	− ·1136	+ 53	+68 40 45·3	−19·519	− ·119	+ 7	9, 9	20·84, 20·84	15378
1021	BD + 36° 2162	6·9	11 8 28·01	+ 3·2910	− ·0254	−224	+36 13 32·1	−19·540	− ·099	−177	5, 5	14·51, 14·51	15397
1022	Gr. 1749	7·3	11 9 31·24	+ 3·3308	− ·0311	− 4	+41 29 48·5	−19·560	− ·098	+ 6	7, 7	16·44, 16·44	15425
1023	δ Leon S	2·5	11 10 7·363	+ 3·1832	− ·0129	+106*	+20 56 5·38	−19·572	− ·092	−145*	15, 15	16·36, 16·43	2972
1024	θ Leon F	3·3	11 10 18·394	+ 3·1544	− ·0096	− 43*	+15 50 23·13	−19·575	− ·091	− 86*	8, 40	17·95, 17·02	2974
1025	Gr. 1755	6·8	11 11 45·41	+ 3·4458	− ·0495	+188	+53 10 50·3	−19·602	− ·095	+ 48	4, 4	13·43, 13·43	2977
1026	η Leon	5·7	11 11 56·61	+ 3·1407	− ·0082	− 6	+13 43 1·8	−19·606	− ·087	− 26	2, 2	12·32, 12·32	2978
1027	Pi 11h, 19	6·1	11 12 28·85	+ 3·3993	− ·0429	− 93	+49 53 9·0	−19·615	− ·094	− 19	6, 6	14·61, 14·61	2980
1028	ψ Leon	4·6	11 12 51·01	+ 3·0573	+ ·0009	− 75	− 3 14 28·0	−19·622	− ·083	− 44	1, 2	12·30, 12·28	2982
1029	ξ U. Maj	4·4	11 14 11·61	+ 3·2383	− ·0200	−333	+31 57 12·4	−19·645	− ·085	−598	4, 5	12·25, 12·25	2984
1030	ν U. Maj S	3·5	11 14 25·942	+ 3·2475	− ·0223	− 18*	+33 30 13·10	−19·650	− ·085	+ 15*	20, 18	14·10, 14·41	2985
1031	55 U. Maj	4·8	11 15 3·04	+ 3·2807	− ·0272	− 49	+38 35 50·9	−19·660	− ·085	− 84	3, 4	13·56, 13·24	2987
1032	δ Crat F	3·8	11 15 35·372	+ 3·0068	+ ·0066	− 85*	−14 22 21·01	−19·670	− ·076	+195*	4, 12	20·79, 19·13	2989
1033	Pi 11h, 34	6·3	11 16 19·48	+ 3·6844	− ·0998	+ 92	+67 30 45·52	−19·682	− ·093	− 49	6, 6	20·78, 20·78	15586
1034	σ Leon F	4·2	11 17 16·200	+ 3·1008	− ·0039	− 63*	+ 6 26 26·38	−19·697	− ·076	− 15*	8, 29	18·68, 16·24	2990
1035	BD + 57° 1316	6·2	11 17 32·04	+ 3·4589	− ·0583	− 61	+57 29 9·1	−19·702	− ·084	+ 16	6, 6	20·45, 20·45	15607
1036	Pi 11h, 43	6·1	11 18 24·94	+ 3·5839	− ·0836	− 7	+64 44 28·1	−19·716	− ·086	+ 36	1, 2	15·28, 14·78	2993
1037	56 U. Maj	5·1	11 18 43·07	+ 3·3031	− ·0330	− 27	+43 53 39·7	−19·721	− ·078	− 24	6, 5	11·31, 11·31	2995
1038	ι Leon	4·0	11 20 0·84	+ 3·1176	− ·0062	+105	+10 56 34·6	−19·740	− ·070	− 85	1, 11	12·36, 12·28	2999
1039	Pi 11h, 59	6·0	11 21 43·94	+ 3·4053	− ·0540	− 72	+56 15 42·3	−19·765	− ·074	+ 42	8, 8	14·65, 14·61	3007
1040	BD + 34° 2222	6·8	11 22 24·96	+ 3·2192	− ·0220	− 32	+33 51 44·7	−19·776	− ·068	+ 9	5, 5	14·49, 14·49	15698
1041	83 Leon	6·7	11 22 58·17	+ 3·0857	− ·0020	−482	+ 3 25 16·2	−19·783	− ·064	+173	2, 1	12·18, 12·09	3014
1042	Pi 11h, 74	6·0	11 24 48·40	+ 3·4603	− ·0703	−161	+62 11 9·6	−19·809	− ·068	+242	2, 2	14·76, 14·76	3022
1043	57 U. Maj	5·4	11 25 2·15	+ 3·2417	− ·0273	− 44	+39 44 59·7	−19·812	− ·063	+ 9	5, 5	12·89, 12·89	3023
1044	Gr. 1787	5·9	11 25 32·21	+ 3·3826	− ·0551	−111	+57 9 6·2	−19·818	− ·066	− 40	5, 5	20·84, 20·84	15760
1045	Gr. 1792	7·1	11 26 19·63	+ 3·2832	− ·0362	+ 9	+47 4 14·1	−19·829	− ·062	+ 24	5, 5	19·12, 19·12	15778
1046	58 U. Maj S	6·0	11 26 27·970	+ 3·2582	− ·0316	− 48*	+43 35 5·63	−19·830	− ·061	+ 71*	10, 9	18·08, 18·83	3028
1047	Gr. 1796	6·9	11 26 49·09	+ 3·2894	− ·0380	−230	+48 20 39·4	−19·835	− ·061	− 79	5, 6	20·55, 20·57	15789
1048	λ Drac S	4·0	11 26 58·248	+ 3·5929	− ·1074	− 74*	+69 44 43·00	−19·837	− ·067	− 24*	10, 10	21·10, 21·10	3031
1049	Gr. 1797 (m)	5·6	11 28 6·52	+ 3·4143	− ·0667	− 5	+61 29 53·3	−19·851	− ·061	− 79	4, 4	20·76, 20·76	3033
1050	BD + 37° 2195	6·2	11 29 57·41	+ 3·2054	− ·0243	−107	+37 13 51·9	−19·873	− ·053	− 63	8, 8	18·52, 18·52	15857

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			h m s	s	s		° ′ ″	″	″				
1051	Gr. 1800	5·9	11 30 57·50	+ 3·3158	− ·0492	+ 13	+55 11 59·4	−19·884	− ·053	− 4	6 6	20·46, 20·46	3046
1052	2 Drac	5·5	11 31 39·96	+ 3·5192	− ·1035	+226	+69 44 27·1	−19·892	− ·056	−130	3, 4	14·93, 14·24	3050
1053	ν Leon F	4·5	11 33 6·504	+ 3·0717	+ ·0006	0*	− 0 24 34·23	−19·907	− ·044	+ 35*	4, 25	19·80, 18·54	3058
1054	Gr. 1807	5·9	11 33 49·97	+ 3·2609	− ·0409	− 56	+51 2 2·2	−19·914	− ·046	− 42	5, 6	19·66, 19·76	15947
1055	59 U. Maj	5·7	11 34 21·32	+ 3·2171	− ·0310	−134	+44 2 29·2	−19·919	− ·043	− 52	8, 5	12·30, 12·90	3063
1056	60 U. Maj	6·2	11 34 32·31	+ 3·2331	− ·0351	− 40	+47 15 1·0	−19·921	− ·044	− 34	5, 5	16·69, 16·69	15970
1057	BD + 34° 2242	6·3	11 34 35·05	+ 3·1727	− ·0210	− 23	+34 2 29·2	−19·922	− ·043	− 26	7, 7	14·02, 14·02	15972
1058	61 U. Maj	5·5	11 37 6·32	+ 3·1648	− ·0212	− 7	+34 37 39·1	−19·945	− ·038	−390	6, 7	11·90, 11·95	3075
1059	BD + 55° 1481	6·4	11 37 40·30	+ 3·2625	− ·0482	− 18	+55 35 16·2	−19·950	− ·038	+ 16	8, 8	16·64, 16·64	16052
1060	3 Drac S	5·6	11 38 18·233	+ 3·3727	− ·0838	− 77*	+67 9 36·08	−19·955	− ·038	+ 36*	15, 15	16·43, 15·10	3081
1061	Pi 11h, 149	6·2	11 40 19·04	+ 3·1279	− ·0141	− 13	+25 38 4·1	−19·971	− ·031	+ 13	7, 7	19·83, 19·83	16105
1062	ν Virg	4·3	11 42 0·29	+ 3·0856	− ·0028	− 12	+ 6 56 57·6	−19·983	− ·027	−187	1, 1	12·27, 12·27	3089
1063	χ U. Maj S	3·9	11 42 5·807	+ 3·1894	− ·0350	−136*	+48 11 42·91	−19·984	− ·028	− 16*	25, 19	14·36, 14·18	3090
1064	Gr. 1825	5·6	11 42 55·25	+ 3·2206	− ·0476	+ 19	+56 2 44·0	−19·989	− ·026	− 40	4, 4	12·77, 12·77	3093
1065	β Leon F	2·2	11 45 14·151	+ 3·0958	− ·0071	−342*	+14 59 28·90	−20·033	− ·020	−123*	10, 39	17·88, 16·56	3101
1066	Pi 11h, 164	6·0	11 45 48·29	+ 3·1314	− ·0209	− 96	+35 20 53·3	−20·006	− ·019	− 12	1, 1	11·28, 11·28	3102
1067	β Virg F	3·6	11 46 47·311	+ 3·0757	·0000	+495*	+ 2 11 14·83	−20·011	− ·017	−279*	12, 33	18·12, 16·85	3105
1068	BD + 34° 2264	6·1	11 47 15·89	+ 3·1226	− ·0195	− 17	+33 47 30·3	−20·014	− ·017	+ 12	6, 6	19·96, 19·96	16223
1069	Gr. 1830	6·7	11 48 36·23	+ 3·1249	− ·0231	+3396	+38 16 30·0	−20·020	− ·014	−5807	3, 6	14·94, 13·94	3112
1070	γ U. Maj S	2·3	11 49 53·607	+ 3·1542	− ·0422	+107*	+54 6 42·07	−20·025	− ·012	+ 3*	19, 19	18·14, 18·14	3117
1071	65 U. Maj	6·8	11 51 11·99	+ 3·1276	− ·0317	+ 6	+46 53 38·8	−20·030	− ·009	− 7	6, 6	19·09, 19·09	3120
1072	Br. 1610	7·1	11 51 17·60	+ 3·1270	− ·0316	+ 15	+46 53 13·3	−20·030	− ·009	− 19	5, 6	17·50, 17·96	3122
1073	o Leon	5·7	11 51 49·19	+ 3·0865	− ·0073	+ 17	+16 3 50·5	−20·032	− ·008	− 7	10, 9	11·69, 11·73	3123
1074	66 U. Maj	6·2	11 52 3·80	+ 3·1441	− ·0468	+ 15	+57 0 58·2	−20·032	− ·007	+ 3	5, 7	13·91, 14·17	3125
1075	Gr. 1838	6·2	11 52 58·91	+ 3·1496	− ·0574	− 43	+61 58 3·4	−20·035	− ·005	− 44	6, 7	17·13, 16·43	16336
1076	Gr. 1843	6·6	11 54 26·64	+ 3·1335	− ·0565	+ 59	+61 52 56·0	−20·039	− ·002	− 4	5, 6	17·72, 17·82	16373
1077	BD + 33° 2176	6·0	11 55 26·27	+ 3·0903	− ·0185	+ 3	+33 35 4·6	−20·041	− ·000	− 4	9, 7	17·50, 19·27	16392
1078	7 Virg	5·5	11 56 6·46	+ 3·0744	− ·0005	− 11	+ 4 4 22·9	−20·042	+ ·001	− 18	4, 4	12·25, 12·25	3135
1079	π Virg F	4·7	11 57 1·799	+ 3·0749	− ·0020	− 3*	+ 7 1 57·07	−20·043	+ ·003	− 33*	13, 28	18·29, 20·21	3139
1080	BD + 36° 2230	5·8	11 57 49·53	+ 3·0821	− ·0205	− 79	+36 27 41·1	−20·044	+ ·003	− 97	6, 7	11·79, 12·28	3141
1081	67 U. Maj	5·2	11 58 18·99	+ 3·0821	− ·0268	−290	+43 27 41·2	−20·044	+ ·006	+ 63	6, 5	12·64, 12·91	3143
1082	BD + 69° 638	7·1	11 59 47·15	+ 3·0762	− ·0778	− 12	+69 26 14·8	−20·045	+ ·008	+ 15	6, 6	18·97, 18·97	16473
1083	o Virg F	4·3	12 1 23·350	+ 3·0715	− ·0029	−147*	+ 9 8 58·49	−20·044	+ ·011	+ 38*	14, 50	18·37, 17·68	3155
1084	Gr. 1852	6·1	12 1 27·19	+ 3·0349	− ·1277	+438	+77 19 30·4	−20·044	+ ·011	− 89	7, 7	13·16, 13·16	3156
1085	BD + 75° 469	6·4	12 6 9·47	+ 2·9379	− ·0999	+ 3	+75 4 42·9	−20·038	+ ·020	+ 2	13, 10	17·80, 18·34	16612
1086	Pi 12h 3	5·7	12 6 57·62	+ 3·9515	− ·0132	− 7	+27 41 56·2	−20·036	+ ·022	− 19	6, 6	19·94, 19·94	16630
1087	Gr. 1858	6·4	12 7 39·20	+ 2·7499	− ·1686	− 93	+82 7 37·1	−20·034	+ ·022	− 1	5, 6	20·66, 20·60	3177
1088	68 U. Maj	6·7	12 8 1·05	+ 2·9996	− ·0423	+ 12	+57 28 19·7	−20·032	+ ·023	− 17	3, 3	14·65, 14·65	3179
1089	4 Coma	6·0	12 8 3·07	+ 3·0496	− ·0122	− 37	+26 17 16·9	−20·032	+ ·024	− 38	2, 2	13·38, 13·38	3180
1090	4 H. Drac S	5·2	12 8 42·266	+ 2·8334	− ·1164	+ 32*	+78 1 57·88	−20·030	+ ·024	+ 18*	20, 22	16·85, 16·43	3182
1091	1 C. Ven	6·5	12 11 0·69	+ 2·9849	− ·0360	− 11	+53 51 6·5	−20·022	+ ·030	− 21	3, 3	12·30, 12·30	3186
1092	δ U. Maj S	3·3	12 11 43·289	+ 2·9658	− ·0409	+137*	+57 26 57·60	−20·018	+ ·031	+ 3*	12, 12	17·89, 17·96	3190
1093	Gr. 1865	6·6	12 12 10·74	+ 2·8411	− ·0800	− 33	+72 58 6·81	−20·016	+ ·031	− 39	11, 12	18·38, 19·12	16744
1094	Pi 12h, 29	5·2	12 12 14·16	+ 3·0236	− ·0165	− 36	+33 28 50·0	−20·014	+ ·033	−116	3, 2	15·99, 18·34	3195
1095	2 C. Ven	6·1	12 12 22·28	+ 3·0100	− ·0223	+ 19	+41 4 38·6	−20·015	+ ·032	− 46	7, 5	11·86, 12·08	3193
1096	Br. 1642	7·2	12 12 57·79	+ 2·6192	− ·1234	+109	+80 32 31·0	−20·012	+ ·031	+ 6	5, 5	20·88, 20·88	3196
1097	BD + 54° 1510	6·2	12 13 47·89	+ 2·9637	− ·0349	+ 38	+53 36 31·9	−20·008	+ ·035	− 54	5, 6	20·09, 20·12	16767
1098	Br. 1672 P	6·5	12 14 31·745	+ 0·4978	+ ·6161	− 69*	+88 6 56·07	−20·004	+ ·013	+ 58*	113, 82	18·38, 18·07	3208
1099	BD + 31° 2350	6·5	12 14 44·89	+ 3·0218	− ·0144	+ 70	+30 40 5·6	−20·003	+ ·037	−130	5, 5	16·90, 16·90	16789
1100	8 Coma	6·4	12 15 32·04	+ 3·0335	− ·0098	− 22	+23 27 4·3	−19·999	+ ·038	− 23	2, 3	20·34, 20·31	3206

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			h m s	s	s		° ′ ″	″	″				
1101	η Virg.....F	4·0	12 16 4·101	+ 3·0732	+ ·0029	− 41*	− 0 15 0·01	−19·995	+ ·040	− 25*	2, 8	16·30, 16·57	3210
1102	Gr. 1867.....	7·0	16 29·67	+ 2·9969	− ·0195	− 48	+38 19 6·9	−19·992	+ ·040	0	2, 2	19·78, 19·78	3212
1103	Pi 12h, 52.....	6·6	16 32·02	+ 3·0250	− ·0115	−108	+26 25 3·8	−19·993	+ ·040	+ 14	4, 5	20·82, 20·71	16827
1104	B.A.C. 4153.....	5·9	16 33·68	+ 3·0236	− ·0117	− 52	+27 2 17·9	−19·992	+ ·040	−119	6, 7	13·33, 13·04	3214
1105	Pi 12h, 57.....	5·9	18 24·76	+ 3·0223	− ·0106	− 46	+25 11 23·8	−19·980	+ ·044	− 14	5, 5	19·90, 19·90	16866
1106	12 Coma.....	4·9	12 18 44·30	+ 3·0190	− ·0112	− 6	+26 15 43·9	−19·978	+ ·044	− 14	5, 4	11·50, 11·56	3224
1107	4 C. Ven.....	6·2	20 5·93	+ 2·9638	− ·0228	− 76	+42 57 27·9	−19·968	+ ·046	+ 5	2, 1	15·26, 19·23	3229
1108	5 C. Ven.....	5·2	20 23·17	+ 2·9210	− ·0312	+ 10	+51 58 38·8	−19·965	+ ·046	+ 7	4, 4	12·80, 12·80	3230
1109	13 Coma.....	5·3	20 32·92	+ 3·0131	− ·0112	− 17	+26 30 51·8	−19·964	+ ·048	− 23	2, 2	19·78, 19·78	3231
1110	Gr. 1888.....	6·4	21 36·91	+ 2·8122	− ·0479	− 29	+64 13 5·2	−19·956	+ ·047	− 2	7, 6	18·68, 18·68	16941
1111	6 C. Ven.....	5·3	12 22 9·55	+ 2·9667	− ·0196	− 66	+39 26 4·5	−19·951	+ ·050	− 39	15, 13	13·13, 13·08	3235
1112	14 Coma.....	5·2	22 39·19	+ 3·0036	− ·0117	− 17	+27 41 0·9	−19·947	+ ·052	− 18	3, 3	17·64, 17·64	3240
1113	Gr. 1893.....	6·4	23 9·78	+ 2·6491	− ·0643	−339	+72 20 43·3	−19·942	+ ·047	− 21	11, 11	20·63, 20·63	16960
1114	16 Coma.....	5·1	23 14·41	+ 3·0031	− ·0114	+ 1	+27 14 27·5	−19·942	+ ·052	− 13	2, 2	19·72, 19·72	3244
1115	73 U. Maj.....	6·0	24 1·52	+ 2·8645	− ·0348	− 28	+56 7 40·2	−19·934	+ ·051	− 20	6, 4	11·85, 11·85	3248
1116	17 Coma.....	5·4	12 25 10·10	+ 3·0003	− ·0107	− 14	+26 19 40·1	−19·924	+ ·056	− 22	4, 4	19·78, 19·78	3251
1117	20 Coma.....S	5·9	25 57·274	+ 3·0139	− ·0078	+ 27*	+21 18 39·99	−19·916	+ ·058	− 46*	16, 12	14·36, 14·63	3257
1118	δ Corv.....F	3·0	25 58·842	+ 3·1164	+ ·0121	−144*	−16 5 52·43	−19·916	+ ·060	−143*	6, 14	20·66, 19·92	3256
1119	74 U. Maj.....	5·6	26 27·67	+ 2·8184	− ·0375	− 87	+58 49 5·2	−19·911	+ ·056	+ 82	5, 6	12·57, 11·98	3260
1120	7 C. Ven.....	6·5	26 30·65	+ 2·8759	− ·0297	−297	+51 56 57·4	−19·911	+ ·057	+ 15	4, 4	14·03, 14·04	3261
1121	75 U. Maj.....	6·0	12 26 33·90	+ 2·8137	− ·0379	+ 40	+59 10 56·8	−19·910	+ ·056	− 29	5, 5	20·31, 20·31	17042
1122	Gr. 1903.....	6·4	27 16·39	+ 2·8585	− ·0308	+ 18	+53 29 11·4	−19·903	+ ·058	+174	3, 3	15·04, 15·04	3267
1123	β C. Ven.....S	4·4	30 11·063	+ 2·9161	− ·0201	−628*	+41 45 53·27	−19·871	+ ·064	+281*	21, 18	14·23, 14·26	3279
1124	κ Drac.....S	3·8	30 17·416	+ 2·5836	− ·0523	−118*	+70 12 5·27	−19·870	+ ·058	+ 6*	22, 21	18·01, 17·88	3281
1125	23 Coma.....	4·9	31 7·04	+ 2·9959	− ·0083	− 52	+23 2 32·0	−19·860	+ ·068	+ 7	1, 3	12·30, 12·25	3283
1126	24² Coma.....F	5·3	12 31 22·129	+ 3·0108	− ·0060	+ 3*	+18 47 23·41	−19·857	+ ·068	+ 16*	6, 23	19·91, 20·04	3285
1127	BD + 22° 2490.....	6·6	31 23·44	+ 2·9980	− ·0079	+ 10	+22 17 42·1	−19·857	+ ·068	− 26	4, 4	20·33, 20·33	17150
1128	6 Drac.....	5·3	31 24·21	+ 2·5565	− ·0514	− 66	+70 26 5·7	−19·855	+ ·060	− 10	5, 5	12·44, 12·44	3287
1129	f Virg.....	6·1	32 55·49	+ 3·0909	+ ·0065	− 20	− 5 25 8·6	−19·838	+ ·073	− 27	1, 1	12·30, 12·30	3290
1130	τ U. Maj.....	Var.	12 32 58·96	+ 2·7421	− ·0362	− 31	+59 53 59·7	−19·837	+ ·066	− 17	2, 2	14·33, 14·33	17178
1131	9 C. Ven.....	6·5	35 9·98	+ 2·8934	− ·0190	− 19	+41 17 13·2	−19·809	+ ·073	− 31	4, 3	11·30, 11·30	3297
1132	χ Virg.....F	4·8	35 22·400	+ 3·1001	+ ·0078	− 51*	− 7 34 58·76	−19·807	+ ·078	− 37*	8, 33	20·58, 18·21	3298
1133	BD + 36° 2295.....	6·3	35 38·09	+ 2·9204	− ·0156	+ 20	+36 21 50·6	−19·803	+ ·074	− 13	7, 7	14·60, 14·60	17231
1134	ρ Virg.....	5·0	38 5·25	+ 3·0312	− ·0014	+ 61	+10 38 56·0	−19·769	+ ·082	−101	9, 8	11·56, 11·47	3309
1135	Gr. 1923.....	7·3	12 38 6·40	+ 0·9501	+ ·1128	−137	+84 3 19·0	−19·768	+ ·031	+ 11	10, 10	19·52, 19·52	17252
1136	76 U. Maj.....S	6·1	38 17·713	+ 2·6343	− ·0373	− 38*	+63 7 29·01	−19·766	+ ·072	− 19*	12, 12	16·52, 16·52	3313
1137	10 C. Ven.....	6·3	41 27·04	+ 2·8733	− ·0169	−306	+39 41 8·7	−19·718	+ ·084	+130	10, 9	13·00, 13·19	3321
1138	Gr. 1922.....	5·6	41 36·62	+ 2·8243	− ·0211	+ 5	+45 50 59·9	−19·716	+ ·083	+ 3	3, 3	14·64, 14·64	3322
1139	d² Virg.....	5·4	41 49·77	+ 3·0384	+ ·0001	− 76	+ 8 5 0·0	−19·712	+ ·089	+ 1	1, 2	12·30, 12·30	3323
1140	27 Coma.....	5·4	12 42 54·03	+ 2·9968	− ·0042	+ 4	+16 59 12·9	−19·695	+ ·089	− 5	4, 4	20·32, 20·32	3327
1141	35 Virg.....	6·8	44 2·27	+3·0550	+ ·0023	− 3	+ 3 58 55·5	−19·676	+ ·094	− 12	3, 3	12·33, 12·33	3331
1142	Gr. 1926.....	6·1	44 7·14	+ 2·5669	− ·0345	+ 30	+63 11 25·5	−19·674	+ ·081	− 10	3, 3	15·03, 15·03	3332
1143	7 Drac.....	5·8	44 31·01	+ 2·4593	− ·0374	+ 10	+67 11 58·9	−19·668	+ ·077	− 6	2, 2	15·32, 15·32	3336
1144	BD + 25° 2568.....	6·4	45 8·01	+ 2·9494	− ·0317	−249	+25 15 5·0	−19·657	+ ·093	−116	4, 4	19·79, 19·79	17400
1145	11 C. Ven.....	6·4	12 45 14·96	+ 2·7725	− ·0225	− 66	+48 52 31·1	−19·655	+ ·088	+ 7	3, 3	20·33, 20·33	3338
1146	Gr. 1930.....	6·0	45 23·86	+ 2·6038	− ·0317	+145	+60 43 43·8	−19·653	+ ·083	− 5	6, 6	20·36, 20·36	17404
1147	Gr. 1931.....	6·1	46 37·13	+ 2·8625	− ·0153	− 85	+37 55 28·6	+19·631	+ ·092	+ 14	8, 12	11·70, 11·80	3343
1148	31 Coma.....	5·1	48 2·86	+ 2·9252	− ·0094	− 12	+27 56 54·7	−19·606	+ ·097	− 26	11, 9	11·78, 11·88	3347
1149	32°H Caml.....P	5·5	48 33·940	+ 0·4769	+ ·1916	− 18*	+83 49 13·92	−19·596	+ ·023	+ 15*	169, 102	18·98, 19·13	3356
1150	BD + 34° 2369.....	6·4	50 38·30	+ 2·8757	− ·0124	− 77	+33 56 25·7	−19·557	+ ·100	+ 22	5, 5	18·73, 18·73	17517

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			h m s	s	s		° ′ ″	″	″				
1151	ε U. Maj. S	1·6	12 50 44·071	+ 2·6317	− ·0264	+139*	+56 21 59·82	−19·556	+ ·093	− 11*	7, 9	16·01, 15·60	3363
1152	Gr. 1933	6·1	51 31·20	+ 2·7466	− ·0203	− 17	+47 36 11·6	−19·540	+ ·098	− 12	5, 5	19·92, 19·92	17533
1153	δ Virg. F	3·6	51 49·486	+ 3·0529	+ ·0028	−317*	+ 3 48 17·08	−19·534	+ ·108	− 64*	6, 13	18·06, 16·26	3367
1154	α^2 C. Ven. S	2·9	52 31·360	+ 2·8294	− ·0148	−199*	+38 43 22·57	−19·521	+ ·102	+ 43*	14, 13	15·86, 15·67	3371
1155	Gr. 1942	6·2	53 42·53	+ 2·7449	− ·0192	− 21	+46 35 0·1	−19·497	+ ·101	− 55	5, 5	16·36, 16·36	17582
1156	BD + 76° 473	6·2	12 56 34·31	+ 1·7751	− ·0124	+ 15	+75 52 36·2	−19·437	+ ·072	+ 6	10, 10	18·41, 18·41	17637
1157	9 Drac.	5·8	57 5·65	+ 2·2966	− ·0284	−254	+67 0 6·2	−19·425	+ ·091	− 14	1, 1	11·31, 11·31	3380
1158	ε Virg. F	2·8	58 26·582	+ 3·0051	− ·0005	−185*	+11 21 43·16	−19·397	+ ·119	+ 17*	2, 4	19·88, 17·87	3383
1159	Gr. 1952	6·5	59 35·79	+ 2·4746	− ·0253	− 32	+60 7 10·0	−19·371	+ ·101	− 15	5, 5	18·13, 18·13	17702
1160	14 C. Ven.	5·3	13 2 14·27	+ 2·8105	− ·0121	− 21	+36 11 59·3	−19·310	+ ·118	+ 10	3, 4	11·99, 12·08	3392
1161	Gr. 1956	5·9	13 2 30·07	+ 2·7044	− ·0170	+ 4	+45 40 9·8	−19·304	+ ·114	+ 29	3, 4	15·03, 15·36	3396
1162	Gr. 1960	6·3	2 30·68	+ 1·8631	− ·0148	− 43	+73 25 34·3	−19·304	+ ·081	+ 15	10, 11	20·64, 20·60	17748
1163	40 Coma	6·2	2 43·62	+ 2·9194	− ·0056	+ 23	+23 1 5·4	−19·299	+ ·123	− 57	3, 3	20·35, 20·35	3398
1164	41 Coma	5·0	3 34·83	+ 2·8780	− ·0080	+ 19	+28 1 37·4	−19·278	+ ·123	− 85	5, 5	15·54, 15·54	3401
1165	Br. 1745	6·9	4 18·31	+ 2·8764	− ·0079	− 32	+27 57 27·6	−19·261	+ ·124	− 70	6, 6	20·35, 20·35	17796
1166	θ Virg. F	4·4	13 6 3·875	+ 3·1070	+ ·0080	− 26*	− 5 8 20·30	−19·218	+ ·137	− 42*	15, 38	17·95, 16·96	3409
1167	Gr. 1961	5·8	6 11·44	+ 2·7773	− ·0124	− 87	+37 49 20·3	−19·214	+ ·124	− 2	9, 10	12·15, 12·08	17826
1168	15 C. Ven.	6·5	6 15·03	+ 2·7650	− ·0130	− 12	+38 55 58·9	−19·214	+ ·123	− 4	3, 3	19·08, 19·08	3411
1169	Pi 13h, 12	6·5	6 56·37	+ 2·3296	− ·0227	− 47	+62 37 42·2	−19·196	+ ·106	− 14	6, 5	19·35, 19·54	17837
1170	18 C. Ven.	7·5	8 4·47	+ 2·7305	− ·0138	− 25	+41 11 27·6	−19·167	+ 125	− 14	2, 2	19·81, 19·81	3423
1171	β Coma S	4·3	13 8 22·496	+ 2·8617	− ·0076	−604*	+28 15 28·63	−19·159	+ ·131	+874*	15, 13	15·57, 15·23	3424
1172	Pi 13h, 27	5·1	10 19·11	+ 2·7275	− ·0131	− 39	+40 32 59·1	−19·108	+ ·128	− 1	6, 6	14·88, 14·88	3432
1173	Gr. 1974	6·4	11 22·99	+ 1·7167	− ·0048	+ 49	+73 11 46·2	−19·080	+ ·085	− 31	11, 11	20·49, 20·49	17934
1174	19 C. Ven.	5·9	12 9·93	+ 2·7099	− ·0132	−104	+41 15 3·0	−19·059	+ ·130	− 1	6, 5	12·75, 12·85	3439
1175	σ Firg. F	5·0	13 48·990	+ 3·0293	+ ·0030	− 9*	+ 5 51 52·77	−19·014	+ ·148	+ 9*	13, 28	20·14, 20·38	3446
1176	BD + 69° 694	6·1	13 14 0·82	+ 1·9792	− ·0148	− 27	+68 48 10·3	−19·008	+ ·100	+ 11	5, 6	15·58, 15·71	17991
1177	20 C. Ven. S	4·8	14 10·929	+ 2·7038	− ·0127	−111*	+40 58 1·44	−19·004	+ ·133	+ 4*	14, 10	15·19, 15·06	3447
1178	Pi 13h, 51	6·2	14 59·50	+ 2·7777	− ·0098	+ 26	+34 29 33·4	−18·981	+ ·138	− 5	6, 6	20·04, 20·04	18010
1179	21 C. Ven.	5·2	15 3·33	+ 2·5592	− ·0164	− 28	+50 4 34·0	−18·979	+ ·128	+ 8	5, 6	11·99, 11·90	3450
1180	B.A.C. 4457	6·7	15 37·44	+ 2·7637	− ·0101	− 24	+35 31 18·3	−18·963	+ ·138	+ 5	7, 5	20·05, 19·93	18023
1181	23 C. Ven.	5·8	13 16 57·49	+ 2·6961	− ·0121	− 51	+40 32 37·9	−18·925	+ ·138	− 20	5, 5	13·06, 13·06	3455
1182	Gr. 1986	6·4	20 29·99	+ 2·7210	− ·0103	+ 18	+37 25 30·6	−18·821	+ ·144	− 14	5, 5	17·38, 17·38	18127
1183	ζ^1 U. Maj. S	2·2	20 54·570	+ 2·4051	− ·0165	+148*	+55 19 0·14	−18·809	+ ·129	− 30*	9, 8	14·62, 14·15	3474
1184	α Virg. F	0·9	21 14·376	+ 3·1610	+ ·0117	− 28*	−10 46 12·96	−18·799	+ ·168	− 36*	11, 28	19·89, 18·44	3476
1185	Pi 13h, 77	5·9	21 32·11	+ 2·8632	− ·0046	0	+24 14 43·5	−18·790	+ ·153	− 14	5, 5	20·15, 20·15	3478
1186	g U. Maj.	4·0	13 22 13·28	+ 2·3932	− ·0161	+143	+55 22 42·4	−18·769	+ ·130	− 24	9, 8	12·49, 12·63	3480
1187	Gr. 1991	5·7	23 3·55	+ 2·5749	− ·0135	+ 23	+46 25 4·4	−18·743	+ ·141	− 29	5, 5	20·36, 20·36	18171
1188	Gr. 1998	7·1	23 47·36	+ 1·5426	+ ·0065	0	+72 39 46·6	−18·720	+ ·088	0	10, 9	20·80, 20·69	
1189	Pi 13h, 109 S	6·3	24 13·188	+ 1·5237	+ ·0076	+ 56*	+72 46 50·37	−18·706	+ ·088	− 17*	21, 21	19·80, 19·63	3488
1190	Gr. 1996	6·7	24 33·26	+ 2·0336	− ·0128	−107	+65 7 24·3	−18·696	+ ·115	+ 24	5, 6	18·18, 17·88	18196
1191	70 Virg.	5·2	13 24 45·95	+ 2·9508	− ·0002	−167	+14 10 51·4	−18·689	+ ·163	−586	2, 2	11·39, 11·38	3487
1192	Pi 13h, 110	5·5	25 42·23	+ 2·2158	− ·0149	−114	+60 19 58·5	−18·659	+ ·126	+ 34	4, 4	13·11, 13·11	3494
1193	Gr. 2008	6·3	28 0·68	+ 2·6142	− ·0113	− 84	+42 29 29·1	−18·585	+ ·150	+ 19	6, 6	18·32, 17·68	3500
1194	B.A.C. 4526	6·3	29 14·98	+ 2·8391	− ·0043	+ 35	+24 44 10·1	−18·544	+ ·165	−213	5, 5	18·75, 18·75	18313
1195	ζ Virg. F	3·3	30 52·238	+ 3·0747	+ ·0066	−191*	− 0 12 46·54	−18·490	+ ·181	+34*	6, 18	18·53, 16·44	3508
1196	81 U. Maj.	5·8	13 31 14·48	+ 2·3124	− ·0136	− 20	+55 43 57·5	−18·477	+ ·138	− 10	3, 3	13·06, 12·75	3509
1197	Pi 13h, 136 S	5·1	31 26·970	+ 2·6735	− ·0090	+ 70*	+37 33 57·93	−18·470	+ ·159	− 19*	11, 11	16·30, 16·30	3511
1198	BD + 25° 2652	5·9	33 27·41	+ 2·8258	− ·0040	− 20	+24 59 43·4	−18·401	+ ·171	− 10	6, 5	20·32, 20·34	18399
1199	Gr. 2018	6·5	33 36·96	+ 2·4431	− ·0123	− 4	+49 52 8·9	−18·396	+ ·149	− 21	5, 7	17·18, 16·67	18400
1200	BD + 77° 516	6·7	33 42·73	+ 0·7841	+ ·0653	− 77	+76 55 45·8	−18·392	+ ·053	− 6	12, 12	21·40, 21·40	18390

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			h m s	s	s		° ′ ″	″	″				
1201	25 C. Ven	5·0	13 34 7·95	+ 2·6755	− ·0083	− 86	+36 40 34·1	−18·378	+ ·164	+ 14	2, 2	12·22, 12·22	3518
1202	Pi 13h, 156 (m)	6·9	13 34 42·76	+ 2·4078	− ·0122	− 16	+51 5 45·5	−18·357	+ ·148	− 7	4, 4	20·39, 20·39	3523
1203	Gr. 2029	5·8	13 35 22·86	+ 1·4466	+ ·0122	− 80	+71 37 25·7	−18·334	+ ·093	− 7	4, 5	13·40, 13·27	3527
1204	82 U. Maj	5·5	13 36 36·68	+ 2·3393	− ·0121	−161	+53 17 58·8	−18·290	+ ·147	+ 55	4, 6	11·90, 11·86	3530
1205	BD + 31° 2526	6·1	13 36 50·83	+ 2·7385	− ·0061	− 62	+31 23 22·1	−18·282	+ ·172	+ 80	5, 6	16·00, 15·40	18479
1206	Pi 13h, 163	6·3	13 37 11·50	+ 2·7749	− ·0050	− 52	+28 26 39·4	−18·269	+ ·174	+ 8	6, 6	20·32, 20·32	18491
1207	BD + 51° 1859	6·8	13 37 24·96	+ 2·3947	− ·0117	−138	+50 53 50·7	−18·261	+ ·152	+ 52	5, 5	18·56, 18·56	18492
1208	2 Boot	5·9	13 37 29·50	+ 2·8402	− ·0029	− 12	+22 52 31·0	−18·259	+ ·178	− 37	4, 4	20·39, 20·39	3533
1209	83 U. Maj	5·0	13 37 53·75	+ 2·2803	− ·0117	− 29	+55 3 39·0	−18·244	+ ·145	− 13	8, 7	12·72, 12·78	3536
1210	Gr. 2034	6·0	13 39 9·78	+ 1·8601	− ·0050	+ 95	+65 12 3·1	−18·197	+ ·120	− 13	2, 2	15·39, 15·39	3539
1211	Gr. 2032	6·4	13 39 17·10	+ 2·5667	− ·0094	− 82	+42 3 5·6	−18·193	+ ·165	+ 0	7, 6	17·26, 16·91	18538
1212	BD + 35° 2474	6·2	13 39 22·97	+ 2·6742	− ·0073	+ 15	+35 21 58·9	−18·189	+ ·172	+ 4	8, 7	20·12, 20·22	18539
1213	Pi 13h, 189	5·9	13 41 0·36	+ 2·3314	− ·0110	− 28	+52 26 28·1	−18·129	+ ·153	− 11	5, 5	17·40, 17·40	18572
1214	Gr. 2053	6·3	13 42 18·85	+ 0·2521	+ ·1182	−230	+78 26 23·5	−18·080	+ ·023	+ 40	3, 4	12·51, 12·24	3557
1215	Gr. 2043	5·8	13 43 4·28	+ 2·6044	− ·0079	− 44	+38 52 43·3	−18·052	+ ·173	− 9	5, 5	15·80, 15·80	18621
1216	τ Boot F	4·6	13 43 41·882	+ 2·8849	− ·0005	−340*	+17 49 48·14	−18·028	+ ·192	+ 26*	19, 42	18·04, 17·38	3558
1217	Gr. 2047	5·8	13 43 45·79	+ 2·6008	− ·0078	− 97	+38 55 2·2	−18·025	+ ·175	− 33	4, 4	19·87, 19·87	3559
1218	84 U. Maj	5·8	13 43 47·86	+ 2·2436	− ·0102	− 12	+54 48 25·7	−18·023	+ ·151	− 11	6, 7	12·22, 12·21	3561
1219	η U. Maj S	1·8	13 44 35·328	+ 2·3788	− ·0110	−121*	+49 41 13·75	−17·993	+ ·160	− 21*	10, 10	20·05, 20·05	3566
1220	Gr. 2055	6·1	13 47 18·99	+ 1·9450	− ·0057	+ 95	+61 51 47·6	−17·887	+ ·136	−104	6, 6	17·88, 17·88	18704
1221	B.A.C. 4628	6·2	13 47 50·70	+ 2·6480	− ·0061	− 5	+35 2 11·2	−17·866	+ ·183	− 72	6, 5	14·57, 15·02	3581
1222	B.A.C. 4632	5·1	13 48 29·07	+ 2·6492	− ·0060	− 19	+34 48 55·7	−17·840	+ ·184	− 37	3, 3	13·07, 13·07	3584
1223	Gr. 2060	6·4	13 49 8·73	+ 1·5028	+ ·0093	−347	+68 41 12·8	−17·814	+ ·108	− 70	6, 6	17·74, 17·74	18744
1224	i Drac S	4·8	13 49 14·493	+ 1·7524	− ·0003	+ 4*	+65 5 36·33	−17·810	+ ·126	− 3*	16, 14	13·88, 13·44	3589
1225	7 Boot	6·0	13 49 37·94	+ 2·8693	− ·0004	− 27	+18 18 7·1	−17·794	+ ·200	− 13	3, 3	19·58, 19·58	3588
1226	Pi 13h, 235	6·1	13 49 46·29	+ 2·7312	− ·0041	− 90	+29 0 59·8	−17·788	+ ·192	+ 14	7, 7	19·70, 19·70	3591
1227	86 U. Maj	5·8	13 51 5·55	+ 2·2126	− ·0084	− 23	+54 5 49·4	−17·736	+ ·157	− 16	3, 4	12·40, 12·16	3597
1228	η Boot F	2·7	13 51 6·808	+ 2·8611	− ·0004	− 45*	+18 46 23·24	−17·735	+ ·202	−367*	18, 40	19·82, 18·57	3596
1229	B.A.C. 4652	6·4	13 52 51·01	+ 2·6719	− ·0049	−104	+32 23 52·5	−17·664	+ ·192	+ 42	8, 8	11·87, 11·87	18843
1230	Pi 13h, 264	6·3	13 55 2·69	+ 2·9003	+ ·0012	− 40	+15 0 53·5	−17·572	+ ·210	− 65	6, 6	20·37, 20·37	3605
1231	Gr. 2068	6·1	13 55 12·30	+ 1·8693	− ·0027	− 45	+61 51 8·9	−17·565	+ ·139	+205	7, 7	11·69, 11·69	18893
1232	11 Boot S	6·3	13 57 46·461	+ 2·7272	− ·0030	− 60*	+27 44 53·92	−17·456	+ ·203	+ 3*	15, 15	17·13, 17·13	3613
1233	τ Virg F	4·3	13 57 49·670	+ 3·0509	+ ·0066	+ 13*	+ 1 54 24·78	−17·453	+ ·226	− 25*	12, 41	17·29, 16·46	3612
1234	Pi 13h, 289	6·5	13 59 13·49	+ 2·3821	− ·0071	+ 15	+46 6 58·6	−17·393	+ ·180	− 79	7, 6	17·24, 17·05	18969
1235	Gr. 2075	6·7	14 0 11·21	+ 1·3261	+ ·0174	− 46	+69 2 22·1	−17·351	+ ·104	+ 2	3, 3	13·07, 13·05	3620
1236	Pi 13h, 296	6·4	14 0 12·41	+ 2·2366	− ·0069	− 30	+51 19 55·5	−17·350	+ ·171	− 14	3, 3	15·04, 15·04	3619
1237	94 Virg	6·9	14 2 19·31	+ 3·1748	+ ·0116	− 5	− 8 32 4·1	−17·257	+ ·243	+ 9	3, 3	12·27, 12·27	3624
1238	α Drac S	3·5	14 2 21·462	+ 1·6320	+ ·0048	− 81*	+64 44 2·55	−17·255	+ ·128	+ 15*	29, 28	15·17, 15·75	3626
1239	BD + 25° 2733	6·2	14 4 49·44	+ 2·7548	− ·0016	− 13	+24 40 14·0	−17·144	+ ·215	− 4	7, 7	20·05, 20·05	19085
1240	9H Boot	5·6	14 4 55·85	+ 2·3987	− ·0060	+ 4	+44 12 37·3	−17·140	+ ·188	− 37	8, 6	13·12, 13·39	3630
1241	Gr. 2082	6·5	14 6 26·85	+ 1·8746	− ·0014	−151	+59 41 33·9	−17·070	+ ·151	− 26	4, 5	14·88, 14·98	3634
1242	d Boot S	4·9	14 6 58·733	+ 2·7383	− ·0016	− 17*	+25 26 46·46	−17·046	+ ·217	− 72*	24, 20	16·49, 16·71	3635
1243	Pi 14h 16	6·5	14 7 58·91	+ 2·6191	− ·0035	− 22	+32 38 51·5	−17·000	+ ·210	+ 15	6, 6	20·01, 20·01	19143
1244	Gr. 2087	6·5	14 8 38·28	+ 1·1988	+ ·0232	− 7	+69 12 58·8	−16·969	+ ·100	− 16	6, 5	18·17, 18·15	19145
1245	κ Virg F	4·2	14 8 53·509	+ 3·1975	+ ·0124	+ 5*	− 9 55 30·80	−16·957	+ ·256	+130*	15, 36	18·24, 18·27	3642
1246	4 U. Min S	5·1	14 9 6·789	− 0·2559	+ ·1465	− 89*	+77 53 59·64	−16·947	− ·013	+ 26*	17, 19	18·94, 19·12	3649
1247	Gr. 2091	5·5	14 10 40·04	+ 1·1141	+ ·0274	− 55	+69 47 4·5	−16·874	+ ·095	− 62	4, 3	19·38, 20·37	3656
1248	κ^1 Boot	6·2	14 10 46·57	+ 2·1443	− ·0046	+ 62	+52 8 18·4	−16·869	+ ·177	− 32	3, 4	20·08, 18·91	3652
1249	κ^2 Boot	4·9	14 10 47·78	+ 2·1441	− ·0045	+ 71	+52 8 24·9	−16·868	+ ·175	− 15	4, 4	17·39, 17·14	3654
1250	Gr. 2089	6·5	14 11 22·08	+ 2·4232	− ·0050	− 4	+41 52 13·7	−16·840	+ ·199	−122	3, 3	20·35, 20·35	3658

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			h m s	s	s		° ′ ″	″	″				
1251	99 Virg.	4·1	14 12 4·76	+ 3·1448	+ ·0104	− 12	− 5 38 36·2	−16·807	+ ·257	−427	3, 8	12·30, 12·32	3660
1252	α Boot. F	0·0	14 12 14·415	+ 2·8136	+ ·0005	−778*	+19 34 20·36	−16·800	+ ·231	−2005*	15, 27	18·79, 16·86	3662
1253	BD + 20° 2954	5·8	14 13 3·63	+ 2·7991	+ ·0003	−106	+20 28 16·5	−16·760	+ ·231	−110	5, 5	20·15, 20·15	19263
1254	ι Boot. S	4·8	14 13 30·629	+ 2·1415	− ·0042	−157*	+51 42 45·53	−16·739	+ ·179	+ 86*	11, 11	18·12, 18·13	3667
1255	λ Boot. S	4·2	14 13 31·984	+ 2·2998	− ·0049	−179*	+46 25 55·79	−16·737	+ ·192	+151*	11, 10	19·17, 19·17	3666
1256	Br. 1856	6·4	14 14 41·20	+ 2·1362	− ·0040	− 24	+51 39 13·2	−16·682	+ ·180	− 11	4, 4	14·40, 14·40	3674
1257	A Boot.	5·0	14 14 49·60	+ 2·5369	− ·0036	− 13	+35 51 18·3	−16·675	+ ·212	− 4	2, 2	18·43, 18·43	3673
1258	Pi 14h 52	6·5	14 15 1·60	+ 2·2379	− ·0045	− 12	+48 20 54·7	−16·665	+ ·188	− 54	6, 5	16·43, 16·43	19297
1259	λ Virg. F	4·6	14 15 2·880	+ 3·2446	+ ·0142	− 15*	−13 1 35·40	−16·664	+ ·270	+ 23*	8, 13	19·22, 19·69	3672
1260	Gr. 2100	6·3	14 16 43·01	+ 2·4619	− ·0040	+ 18	+39 8 16·7	−16·583	+ ·209	− 21	3, 3	15·38, 15·38	3684
1261	BD + 30° 2513	6·5	14 18 56·42	+ 2·6383	− ·0019	− 26	+29 42 43·4	−16·473	+ ·226	− 32	10, 9	16·56, 17·03	19385
1262	BD + 25° 2770	6·0	14 19 44·89	+ 2·7049	− ·0008	−122	+25 40 38·4	−16·432	+ ·233	+ 64	7, 7	20·08, 20·08	19400
1263	Gr. 2109	6·5	14 22 25·52	+ 2·4488	− ·0033	− 1	+38 43 52·7	−16·297	+ ·215	− 19	6, 5	20·06, 20·18	3703
1264	θ Boot. S	4·2	14 22 38·627	+ 2·0686	− ·0024	−258*	+52 11 48·92	−16·286	+ ·183	−406*	23, 24	15·79, 15·64	3704
1265	f Boot.	5·6	14 22 58·10	+ 2·7954	+ ·0011	− 52	+19 33 47·4	−16·269	+ ·245	+ 15	5, 6	11·74, 11·68	3705
1266	φ Virg. F	5·0	14 24 20·159	+ 3·0988	− ·0088	− 89*	− 1 53 32·88	−16·199	+ ·273	− 10*	17, 36	19·27, 19·21	3710
1267	B.A.C. 4797	6·7	14 25 10·09	+ 2·4868	− ·0027	− 24	+36 31 55·0	−16·156	+ ·221	− 10	5, 5	20·15, 19·93	19519
1268	g Boot.	5·8	14 26 1·66	+ 2·1193	− ·0025	−319	+50 10 48·8	−16·122	+ ·191	− 55	7, 5	12·40, 11·21	3715
1269	Pi 14h, 103	6·5	14 26 36·92	+ 2·5719	− ·0018	− 16	+32 7 27·5	−16·081	+ ·231	− 3	5, 5	16·81, 16·81	19553
1270	204 B. Boot.	6·3	14 26 39·35	+ 2·3509	− ·0031	+138	+42 8 3·9	−16·079	+ ·211	−225	5, 5	18·55, 18·55	19550
1271	5 U. Min. S	4·5	14 27 39·710	− 0·1535	+ ·1150	+ 34*	+76 1 45·47	−16·026	− ·007	+ 17*	21, 23	18·88, 18·11	3718
1272	ρ Boot. S	3·8	14 28 35·887	+ 2·5936	− ·0014	− 78*	+30 41 59·42	−15·977	+ ·235	+110*	15, 16	17·19, 16·82	3717
1273	Gr. 2123	6·0	14 28 59·17	+ 1·4493	+ ·0115	−268	+63 31 1·7	−15·956	+ ·135	+ 3	5, 6	18·75, 17·54	19595
1274	γ Boot. S	3·0	14 29 3·481	+ 2·4261	− ·0026	− 95*	+38 38 8·79	−15·953	+ ·221	+144*	13, 13	15·86, 15·86	3722
1275	Pi 14h, 126	6·4	14 29 40·67	+ 1·6343	+ ·0061	− 64	+60 33 20·6	−15·920	+ ·152	+ 19	2, 2	13·40, 13·40	3723
1276	BD + 56° 1746	6·0	14 30 9·96	+ 1·8779	+ ·0009	+ 8	+55 43 40·7	−15·894	+ ·174	− 22	6, 6	18·08, 18·08	19627
1277	B.A.C. 4820	6·8	14 31 0·26	+ 2·5443	− ·0016	+ 91	+32 51 46·3	−15·849	+ ·236	− 3	5, 5	19·78, 19·78	19650
1278	Gr. 2127	6·9	14 31 21·11	+ 2·1902	− ·0022	− 32	+47 6 52·5	−15·831	+ ·202	− 19	2, 2	19·90, 19·90	3730
1279	σ Boot.	4·6	14 31 24·75	+ 2·5980	− ·0011	+149	+30 4 13·1	−15·827	+ ·239	+120	4, 2	13·91, 14·94	3729
1280	Pi 14h, 128	6·2	14 31 34·55	+ 2·4554	− ·0022	− 26	+36 57 18·1	−15·818	+ ·227	− 62	4, 5	17·40, 17·01	19662
1281	B.A.C. 4830	6·1	14 32 2·40	+ 2·1027	− ·0017	− 48	+49 41 40·7	−15·793	+ ·193	+ 49	3, 3	15·08, 15·08	3733
1282	BD + 23° 2710	6·7	14 32 43·49	+ 2·7123	+ ·0005	− 11	+23 34 23·9	−15·756	+ ·251	+ 15	8, 7	19·89, 19·96	19687
1283	Pi 14h, 148 (m)	7·2	14 35 31·02	+ 2·0030	− ·0002	− 57	+51 54 6·4	−15·605	+ ·189	+ 6	5, 5	20·39, 20·39	3741
1284	BD + 80° 448	6·5	14 35 39·69	− 1·6806	+ ·2857	−365	+79 59 4·2	−15·596	− ·147	+ 84	8, 10	19·01, 18·34	19705
1285	Pi 14h, 156	5·9	14 35 52·52	+ 1·9012	+ ·0010	+ 17	+54 20 49·4	−15·585	+ ·181	− 23	4, 5	15·66, 15·01	3743
1286	33 Boot.	5·5	14 36 2·86	+ 2·2396	− ·0019	− 69	+44 43 39·4	−15·575	+ ·212	− 29	15, 16	13·15, 13·40	3744
1287	BD + 22° 2731	6·0	14 36 57·46	+ 2·7262	+ ·0010	− 14	+22 17 47·3	−15·525	+ ·258	+ 26	8, 8	20·01, 20·01	19762
1288	ζ Boot.	3·8	14 37 34·0	+ 2·8606	+ ·0034	+ 38	+14 2 57·1	−15·491	+ ·271	− 27	0, 5	12·28	3752
1289	μ Virg. F	3·9	14 39 6·317	+ 3·1526	+ ·0105	+ 71*	− 5 19 58·52	−15·405	+ ·300	−322*	19, 46	19·03, 18·27	3758
1290	34 Boot.	5·0	14 40 7·57	+ 2·6378	+ ·0002	− 8	+26 50 46·0	−15·348	+ ·254	− 21	3, 3	12·32, 12·32	3761
1291	Gr. 2146	6·5	14 40 10·71	+ 1·4840	+ ·0104	+104	+61 34 52·9	−15·345	+ ·146	− 35	7, 6	12·00, 12·09	3762
1292	Gr. 2145	6·0	14 40 49·87	+ 2·3288	− ·0016	− 8	+40 46 33·2	−15·307	+ ·225	+ 22	6, 5	18·43, 18·62	3764
1293	ε Boot.	2·4	14 41 42·75	+ 2·6238	+ ·0001	− 36	+27 23 22·5	−15·258	+ ·254	+ 8	2, 2	13·47, 13·47	3771
1294	BD + 33° 2489	6·6	14 42 5·45	+ 2·5067	− ·0008	+ 31	+33 6 19·8	−15·237	+ ·244	− 84	6, 7	18·60, 18·30	19867
1295	109 Virg. F	3·8	1 42 27·311	+ 3·0393	+ ·0074	− 76*	+ 2 12 29·33	−15·216	+ ·295	− 38*	25, 61	18·78, 17·81	3772
1296	Gr. 2152	6·3	14 46 10·33	+ 2·3774	− ·0010	−216	+38 7 9·7	−15·003	+ ·236	+105	4, 4	14·13, 13·13	3785
1297	α^1 Libr.	5·5	14 46 32·17	+ 3·3221	+ ·0155	− 71	−15 41 9·7	−14·982	+ ·328	− 78	1, 1	20·46, 20·46	3784
1298	h Boot.	5·9	14 46 38·26	+ 2·1391	− ·0005	− 8	+46 25 42·5	−14·976	+ ·214	− 88	9, 10	12·06, 12·09	3789
1299	α^2 Libr. F	2·8	14 46 43·547	+ 3·3231	+ ·0155	− 74*	−15 43 51·28	−14·970	+ ·328	− 76*	20, 32	19·60, 19·18	3787
1300	Pi 14h, 193	6·0	14 46 44·65	+ 2·5817	+ ·0002	+ 17	+28 55 32·6	−14·968	+ ·257	− 9	1, 1	12·48, 12·48	3788

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			h m s	s	s		° ′ ″	″	″				
1301	BD + 24° 2786	5·8	14 46 54·47	+ 2·6727	+ ·0011	+109	+24 13 14·5	−14·960	+ ·266	+ 23	8, 8	19·90, 19·90	19974
1302	39 Boot	6·3	47 8·53	+ 2·0475	+ ·0002	− 72	+49 1 42·7	−14·946	+ ·206	+ 89	1, 1	15·45, 15·45	3793
1303	Gr. 2154	5·6	47 32·23	+ 2·3863	− ·0008	−181	+37 34 45·2	−14·923	+ ·238	+ 85	2, 1	13·98, 12·49	3795
1304	ξ Boot	4·8	47 55·45	+ 2·7578	+ ·0022	+ 92	+19 24 43·8	−14·900	+ ·275	−106	4, 5	12·27, 12·27	3798
1305	Pi 14h, 217	5·8	49 32·25	+ 1·5375	+ ·0090	−169	+59 35 52·8	−14·806	+ ·157	+126	11, 7	13·33, 12·83	3803
1306	β U. Min. S	2·0	14 50 54·318	− 0·1882	+ ·0983	− 74*	+74 27 43·59	−14·725	− ·012	+ 5*	28, 23	18·39, 18·51	3809
1307	Pi 14h, 221	6·1	52 40·78	+ 2·8321	+ ·0036	− 13	+14 44 54·9	−14·619	+ ·289	− 16	2, 11	12·27, 12·34	3811
1308	BD + 32° 2531	6·3	52 52·35	+ 2·4875	·0000	− 37	+32 36 9·1	−14·608	+ ·254	− 5	9, 9	19·94, 19·94	20093
1309	Pi 14h, 235	5·9	53 53·51	+ 1·9796	+ ·0013	+114	+49 56 7·4	−14·547	+ ·205	−232	6, 6	12·42, 12·40	3822
1310	Gr. 2184	6·5	54 47·38	− 1·4572	+ ·2167	− 90	+78 28 46·7	−14·492	− ·140	+ 2	10, 10	17·31, 17·21	20101
1311	Pi 14h, 260 S	5·1	14 56 23·072	+ 0·9614	+ ·0275	−124*	+66 13 50·99	−14·395	+ ·104	+ 32*	18, 19	15·88, 15·69	3827
1312	40 Boot	5·7	56 44·49	+ 2·3034	− ·0001	− 28	+39 33 42·6	−14·374	+ ·239	+ 24	4, 4	14·66, 14·66	3826
1313	δ Libr. F	Var.	56 57·762	+ 3·2075	+ ·0116	− 46*	− 8 13 19·86	−14·360	+ ·332	− 11*	11, 23	19·93, 19·95	3825
1314	Pi 14h, 247	6·3	57 30·58	+ 2·6887	+ ·0019	+ 6	+22 20 30·6	−14·327	+ ·280	− 1	6, 6	20·03, 20·03	20200
1315	β Boot S	3·6	59 7·205	+ 2·2636	+ ·0001	− 40*	+40 41 8·95	−14·228	+ ·238	− 43*	13, 10	15·28, 15·23	3836
1316	Gr. 2182	6·1	14 59 41·53	+ 1·4050	+ ·0123	− 37	+60 29 55·0	−14·193	+ ·150	+ 17	7, 7	12·94, 12·81	3840
1317	Pi 14h, 263	5·8	15 0 6·39	+ 2·3985	+ ·0003	− 39	+35 29 55·8	−14·167	+ ·252	− 13	5, 6	18·81, 18·42	3841
1318	Gr. 2283 P	7·3	1 7·489	−18·8662	+6·4649	− 9*	+87 31 18·14	−14·104	−1·949	+ 19*	144, 88	18·22, 18·08	3877
1319	ψ Boot S	4·6	1 13·903	+ 2·5837	+ ·0012	−133*	+27 14 21·02	−14·097	+ ·274	− 20*	10, 10	18·59, 18·59	3842
1320	ι Boot	6·2	1 19·53	+ 2·0195	+ ·0015	−385	+47 56 44·6	−14·092	+ ·215	+ 30	1, 1	15·41, 15·41	3847
1321	Gr. 2190	7·3	15 1 47·68	+ 0·9266	+ ·0280	+110	+66 4 24·0	−14·062	+ ·102	−132	5, 5	19·80, 19·80	20282
1322	Gr. 2192	6·1	2 48·89	+ 0·9033	+ ·0287	+ 36	+66 12 38·8	−13·999	+ ·100	− 11	5, 5	20·02, 20·04	20297
1323	B.A.C. 4992	5·5	4 8·07	+ 1·7071	+ ·0056	+ 51	+54 50 40·1	−13·916	+ ·186	− 1	3, 3	19·73, 19·73	3856
1324	b Boot	6·1	5 9·49	+ 2·5893	+ ·0015	0	+26 35 16·2	−13·851	+ ·279	− 29	1, 1	15·41, 15·41	3859
1325	Pi 14h, 291	6·2	5 19·53	+ 2·6139	+ ·0017	− 12	+25 23 41·5	−13·841	+ ·281	+ 6	3, 3	20·38, 20·38	3860
1326	Gr. 2194	5·9	15 5 56·67	+ 1·9038	+ ·0029	− 6	+50 20 28·9	−13·801	+ ·207	− 28	6, 6	20·06, 20·06	20380
1327	BD + 19° 2935	6·1	8 39·44	+ 2·7304	+ ·0030	− 3	+19 15 26·4	−13·629	+ ·297	− 2	5, 5	20·39, 20·39	3867
1328	BD + 68° 823	6·2	9 56·00	+ 0·6273	+ ·0390	− 2	+68 3 46·9	−13·546	+ ·073	− 3	5, 5	16·17, 16·17	20451
1329	Gr. 2201	6·5	10 44·18	+ 2·2855	+ ·0010	+ 6	+38 32 42·0	−13·494	+ ·252	− 47	2, 3	14·94, 14·45	3881
1330	Pi 15h, 24	6·5	11 1·74	+ 2·4530	+ ·0011	+ 31	+32 4 1·5	−13·475	+ ·270	− 27	7, 6	20·12, 20·09	20489
1331	Gr. 2206	6·0	15 11 27·63	+ 2·1663	+ ·0012	+ 14	+42 27 0·0	−13·448	+ ·240	− 21	4, 5	16·72, 16·27	20494
1332	Gr. 2208	7·0	12 5·72	+ 2·2804	+ ·0010	− 25	+38 34 38·9	−13·406	+ ·253	+ 41	6, 6	17·62, 17·62	20509
1333	δ Boot S	3·4	12 28·713	+ 2·4119	+ ·0010	+ 71*	+33 35 37·90	−13·382	+ ·267	−127*	11, 9	16·69, 17·86	3887
1334	β Libr. F	2·6	12 58·078	+ 3·2326	+ ·0118	− 67*	− 9 6 25·38	−13·349	+ ·357	− 30*	13, 38	19·01, 17·92	3890
1335	Gr. 2214	5·3	13 45·73	+ 0·6430	+ ·0373	+384	+67 37 52·7	−13·297	+ ·076	−403	3, 2	12·06, 12·36	3893
1336	Pi 15h, 36	5·9	15 15 2·73	+ 2·6902	+ ·0028	− 22	+20 50 46·3	−13·214	+ ·300	− 33	6, 6	20·07, 20·07	3894
1337	o Cor. B.	5·8	17 2·50	+ 2·4908	+ ·0015	− 96	+29 53 15·9	−13·082	+ ·281	− 58	3, 3	14·05, 14·05	3908
1338	11 U. Min.	5·3	17 8·48	− 0·0624	+ ·0723	+ 44	+72 5 45·8	−13·074	0	+ 5	8, 8	13·75, 13·75	3912
1339	BD + 25° 2902	6·4	17 52·29	+ 2·5943	+ ·0022	− 21	+25 13 39·6	−13·026	+ ·293	− 32	9, 9	19·97, 19·97	20649
1340	B.A.C. 5071	5·9	17 52·73	+ 1·7621	+ ·0051	+ 18	+52 13 40·7	−13·026	+ ·201	+ 1	4, 4	20·36, 20·36	3911
1341	BD + 44° 2453	6·7	15 18 6·27	+ 2·0666	+ ·0021	+ 22	+44 42 22·0	−13·011	+ ·235	−114	11, 8	12·01, 12·01	20651
1342	50 Boot	5·6	18 48·39	+ 2·4058	+ ·0014	− 41	+33 12 6·2	−12·964	+ ·273	− 6	3, 2	14·09, 14·40	3915
1343	Gr. 2221	5·9	19 50·85	+ 2·2190	+ ·0015	− 4	+39 50 54·6	−12·895	+ ·253	− 27	5, 5	17·40, 17·40	3922
1344	η Cor. B.	5·2	20 6·20	+ 2·4682	+ ·0016	+101	+30 33 30·1	−12·877	+ ·281	−198	1, 1	12·22, 12·22	3923
1345	γ U. Min. S	2·9	20 49·939	− 0·1064	+ ·0729	− 26*	+72 6 3·30	−12·829	− ·007	+ 12*	21, 19	19·13, 19·41	3928
1346	Gr. 2231	5·7	21 13·12	+ 1·1132	+ ·0191	+ 14	+62 18 49·0	−12·803	+ ·130	− 39	4, 6	19·14, 17·91	20703
1347	B.A.C. 5091	6·0	15 21 23·03	+ 0·9994	+ ·0225	− 24	+63 36 32·2	−12·792	+ ·117	−113	3, 3	17·72, 17·72	3920
1348	BD + 45° 2284	6·2	21 33·36	+ 2·0239	+ ·0025	− 23	+45 32 7·6	−12·780	+ ·232	− 8	7, 6	12·12, 12·10	20720
1349	μ Boot S	4·4	21 39·387	+ 2·2786	− ·0015	−126*	+37 38 21·86	−12·773	+ ·261	+ 78*	12, 10	17·40, 18·29	3926
1350	Gr. 2230	7·1	22 42·03	+ 1·9516	+ ·0032	− 39	+47 19 28·4	−12·703	+ ·225	− 41	3, 3	19·77, 19·77	3932

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			h	m	s	s	s		°	′	″	″	″				
1351	ι Drac. S	3·4	15	23	15·426	+ 1·3333	+ ·0132	− 6*	+59	13	41·98	−12·665	+ ·156	+ 9*	11, 12	17·63, 17·87	3936
1352	Pi 15h, 83	6·4		24	25·28	+ 2·5798	+ ·0024	+ 2	+25	21	42·7	−12·586	+ ·298	− 39	6, 6	20·09, 20·09	3938
1353	β Cor. B. S	3·7		24	44·180	+ 2·4870	+ ·0019	−133*	+29	21	48·62	−12·564	+ ·288	+ 76*	18, 18	15·02, 15·18	3940
1354	BD + 47° 2227	5·9		26	19·56	+ 1·9319	+ ·0035	− 17	+47	27	33·0	−12·456	+ ·226	− 10	9, 10	19·07, 18·52	20825
1355	Pi 15h, 110	6·9		26	20·41	+ 1·0585	+ ·0202	+ 48	+62	32	5·3	−12·455	+ ·126	− 29	5, 7	17·63, 16·87	20817
1356	Gr. 2241	6·3	15	26	21·94	+ 1·1892	+ ·0165	− 26	+60	55	43·2	−12·453	+ ·141	− 6	5, 5	16·02, 16·02	20819
1357	Pi 15h, 119	6·0		28	1·18	+ 1·0622	+ ·0199	− 35	+62	21	21·4	−12·339	+ ·127	− 5	5, 5	14·61, 14·61	20849
1358	ν¹ Boot. S	5·3		28	14·072	+ 2·1538	+ ·0021	+ 9*	+41	5	16·75	−12·325	+ ·253	− 15*	16, 16	16·76, 16·77	3945
1359	ν² Boot	5·1		29	5·83	+ 2·1490	+ ·0022	− 20	+41	9	10·4	−12·265	+ ·253	− 15	4, 2	13·95, 14·00	3949
1360	Pi 15h, 136	6·0		29	52·43	+ 0·8550	+ ·0259	−170	+64	27	37·6	−12·211	+ ·104	+ 76	3, 3	12·36, 12·33	3958
1361	θ Cor. B.	4·3	15	29	54·32	+ 2·4205	+ ·0020	− 20	+31	36	40·6	−12·209	+ ·285	− 26	3, 4	13·06, 12·64	3953
1362	γ Libr. F	4·1		31	19·661	+ 3·3490	+ ·0135	+ 45*	−14	32	25·64	−12·110	+ ·394	− 1*	19, 31	19·41, 18·44	3959
1363	α Cor. B. S	2·2		31	30·619	+ 2·5307	+ ·0024	+ 90*	+26	57	58·20	−12·097	+ ·299	−102*	12, 9	13·18, 14·40	3961
1364	15 Serp.	6·3		32	8·99	+ 2·7279	+ ·0038	− 53	+17	54	16·1	−12·053	+ ·323	− 29	4, 3	20·14, 19·71	3963
1365	μ Cor. B.	5·5		32	29·75	+ 2·1992	+ ·0022	+ 24	+39	15	30·8	−12·029	+ ·262	− 6	6, 5	17·75, 18·00	3967
1366	BD + 38° 2678	6·4	15	33	2·75	+ 2·2172	+ ·0021	+ 22	+38	37	18·7	−11·990	+ ·264	− 14	5, 5	19·43, 19·43	20978
1367	Gr. 2255	6·1		33	17·04	+ 1·5885	+ ·0079	− 15	+54	10	12·9	−11·973	+ ·191	+ 11	6, 6	18·31, 18·31	20977
1368	θ U. Min.	5·4		33	36·57	− 1·8066	+ ·1864	−136	+77	35	59·3	−11·951	− ·206	+ 6	2, 3	13·43, 12·79	3982
1369	φ Boot.	5·4		35	7·89	+ 2·1488	+ ·0024	+ 55	+40	35	48·3	−11·843	+ ·258	+ 47	13, 14	13·59, 13·64	3979
1370	Gr. 2260	6·1		35	36·23	+ 1·5448	+ ·0086	− 45	+54	45	14·4	−11·810	+ ·187	− 22	6, 5	16·41, 16·41	21036
1371	Pi 15h, 153	6·0	15	35	51·98	+ 1·9122	+ ·0039	+ 82	+47	2	40·6	−11·791	+ ·230	−138	2, 2	14·46, 14·46	3985
1372	Pi 15h, 148	6·0		35	54·99	+ 2·3183	+ ·0021	0	+34	55	8·2	−11·788	+ ·278	− 24	6, 4	17·57, 18·62	21048
1373	Gr. 2262	6·0		36	22·68	+ 1·7519	+ ·0056	+ 4	+50	40	1·7	−11·755	+ ·212	− 45	6, 6	12·20, 12·20	21054
1374	ζ² Cor. B.	5·1		36	32·37	+ 2·2603	+ ·0022	− 9	+36	52	41·9	−11·743	+ ·272	− 8	2, 1	12·24, 12·21	3988
1375	BD + 69° 806	5·9		37	26·11	+ 0·1643	+ ·0509	− 96	+69	31	31·3	−11·680	+ ·024	+ 47	5, 5	14·25, 14·44	21065
1376	Gr. 2267	6·5	15	37	29·99	+ 1·3233	+ ·0126	− 7	+58	9	58·9	−11·676	+ ·162	+ 5	6, 6	12·47, 12·47	21076
1377	α Serp. F	2·7		40	34·363	+ 2·9448	+ ·0062	+ 90*	+ 6	39	38·03	−11·456	+ ·357	+ 38*	4, 30	14·14, 14·05	4001
1378	Gr. 2270	5·6		40	48·40	+ 1·6377	+ ·0073	− 64	+52	35	49·3	−11·439	+ ·201	+ 22	4, 3	12·96, 13·45	4004
1379	β Serp. F	3·5		42	43·504	+ 2·7635	+ ·0043	+ 49*	+15	39	19·66	−11·301	+ ·338	− 57*	5, 14	13·83, 15·53	4009
1380	ν Serp.	6·0		43	48·35	+ 2·7896	+ ·0045	− 38	+14	20	43·6	−11·223	+ ·340	+ 27	4, 4	19·75, 19·75	4012
1381	BD + 55° 1777	6·5	15	44	47·30	+ 1·4447	+ ·0100	−147	+55	42	14·2	−11·152	+ ·180	+ 70	3, 6	15·15, 13·55	21233
1382	κ Serp. S	4·2		45	21·743	+ 2·7034	+ ·0038	− 32*	+18	22	20·41	−11·110	+ ·333	−101*	9, 8	19·50, 20·50	4015
1383	R Cor. B.	Var.		45	28·96	+ 2·4715	+ ·0027	+ 3	+28	23	9·2	−11·101	+ ·305	− 18	5, 5	20·33, 20·33	4017
1384	μ Serp. F	3·4		45	42·240	+ 3·1351	+ ·0088	− 59*	− 3	12	6·27	−11·085	+ ·386	− 28*	5, 13	16·21, 13·96	4016
1385	B.A.C. 5428	6·1		45	49·05	+ 1·4459	+ ·0100	+ 12	+55	36	21·6	−11·077	+ ·180	+ 3	2, 3	12·93, 13·78	4022
1386	Gr. 2281	7·0	15	46	4·88	+ 1·1578	+ ·0156	− 48	+59	47	54·4	−11·057	+ ·146	− 23	5, 5	19·27, 19·27	21259
1387	ζ U. Min. S	4·5		46	41·950	− 2·1920	+ ·1978	+ 80*	+78	1	33·61	−11·012	− ·262	− 3*	19, 19	18·75, 19·11	4035
1388	ε Serp. F	3·7		47	4·552	+ 2·9809	+ ·0066	+ 83*	+ 4	42	8·97	−10·985	+ ·368	+ 57*	12, 25	19·37, 17·66	4026
1389	χ Herc.	4·7		50	4·43	+ 2·0340	+ ·0034	+399	+42	39	30·4	+10·764	+ ·255	+620	6, 10	13·03, 13·00	4042
1390	Gr. 2288	6·2		50	31·78	+ 1·3965	+ ·0106	− 19	+56	2	51·2	−10·731	+ ·177	+ 56	5, 6	12·22, 11·94	4047
1391	Pi 15h, 212	6·0	15	51	16·32	+ 2·6493	+ ·0036	− 52	+20	31	47·6	−10·676	+ ·331	+ 39	3, 3	20·01, 20·01	4048
1392	2 Herc.	5·7		52	7·82	+ 2·0023	+ ·0034	− 43	+43	21	21·8	−10·612	+ ·251	+ 58	5, 3	11·82, 12·05	4054
1393	4 Herc.	5·8		52	59·10	+ 2·0212	+ ·0035	− 21	+42	47	1·1	−10·549	+ ·255	0	2, 2	14·42, 14·42	4056
1394	γ Serp. F	3·8		52	59·241	+ 2·7490	+ ·0043	+212*	+15	54	19·35	−10·549	+ ·345	−1296*	26, 46	20·08, 18·89	4055
1395	λ Cor. B.	5·7		53	3·84	+ 2·1796	+ ·0029	+ 37	+38	9	44·8	−10·543	+ ·276	+ 72	2, 3	14·90, 14·42	4057
1396	φ Serp.	5·8	15	53	46·93	+ 2·7756	+ ·0045	− 77	+14	37	42·1	−10·490	+ ·349	+ 74	4, 4	18·96, 18·96	4060
1397	Gr. 2295	6·1		54	22·18	+ 1·1650	+ ·0148	− 32	+59	7	39·8	−10·446	+ ·149	+ 17	3, 6	12·11, 12·13	21424
1398	ε Cor. B.	4·2		54	28·98	+ 2·4891	+ ·0030	− 64	+27	5	49·4	−10·437	+ ·314	− 68	8, 6	12·23, 12·36	4063
1399	Gr. 2293	6·0		54	51·39	+ 2·1177	+ ·0031	− 57	+39	54	30·9	−10·409	+ ·268	+ 52	6, 5	16·15, 16·10	21445
1400	Gr. 2296	5·1		56	0·73	+ 1·4393	+ ·0097	−186	+54	57	38·8	+10·323	+ ·184	+108	4, 2	14·20, 14·86	4072

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			h m s	s	s		° ′ ″	″	″				
1401	Gr. 2297	5·9	15 56 56·54	+ 1·6998	+ ·0062	+ 6	+50 5 39·5	−10·253	+ ·217	− 61	6, 5	12·43, 12·82	21499
1402	r Herc	5·4	15 57 52·11	+ 2·6983	+ ·0040	− 37	+18 1 26·7	−10·183	+ ·342	+144	6, 5	12·37, 12·40	4075
1403	Gr. 2302	6·3	16 0 10·57	+ 1·5294	+ ·0082	− 9	+53 1 26·2	−10·009	+ ·198	− 37	4, 3	15·46, 14·46	4085
1404	X Herc	6–7	16 0 23·78	+ 1·8110	+ ·0051	− 44	+47 26 42·9	− 9·992	+ ·234	+ 53	4, 7	13·97, 14·19	21577
1405	ν Herc	4·8	16 0 27·56	+ 1·8628	+ ·0048	+ 55	+46 14 39·5	− 9·987	+ ·239	− 68	2, 2	14·96, 14·96	4089
1406	θ Drac S	4·1	16 0 28·813	+ 1·1622	+ ·0143	−402*	+58 45 53·89	− 9·986	+ ·151	+337*	10, 11	15·22, 16·17	4090
1407	Pi 15h, 266	6·1	16 0 33·88	+ 2·2046	+ ·0030	+ 11	+36 50 15·9	− 9·980	+ ·283	− 22	5, 5	20·17, 20·17	4088
1408	BD + 59° 1697	6·5	16 1 47·34	+ 1·0902	+ ·0156	− 30	+59 36 58·8	− 9·886	+ ·142	− 27	9, 9	12·08, 12·08	21604
1409	BD + 22° 2926	6·4	16 4 7·14	+ 2·5999	+ ·0035	− 11	+22 1 23·6	− 9·709	+ ·336	− 48	9, 8	19·78, 20·20	21678
1410	κ Herc	5·1	16 4 41·37	+ 2·7094	+ ·0041	− 31	+17 14 46·1	− 9·665	+ ·350	− 14	1, 1	12·27, 12·27	4101
1411	Gr. 2310	6·6	16 4 45·54	+ 1·7858	+ ·0053	− 7	+47 42 15·5	− 9·660	+ ·232	0	6, 9	18·44, 17·46	21684
1412	φ Herc S	4·3	16 6 24·309	+ 1·8919	+ ·0045	− 21*	+45 7 50·99	− 9·533	+ ·247	+ 23*	13, 14	20·21, 20·24	4112
1413	BD + 58° 1622	6·5	16 7 34·42	+ 1·1766	+ ·0133	− 26	+58 7 58·3	− 9·443	+ ·155	+ 18	3, 3	20·50, 20·50	4123
1414	BD + 56° 1867	6·3	16 7 46·78	+ 1·3229	+ ·0109	− 40	+56 1 24·6	− 9·427	+ ·174	+ 18	4, 4	20·24, 20·24	21756
1415	10 Herc	6·3	16 8 26·49	+ 2·5546	+ ·0034	− 16	+23 41 16·5	− 9·377	+ ·333	− 18	2, 2	18·00, 18·00	4125
1416	Pi 16h, 25	6·0	16 9 3·47	+ 2·1938	+ ·0032	− 3	+36 37 4·4	− 9·328	+ ·287	− 40	4, 4	20·66, 20·66	4129
1417	Gr. 2318	6·5	16 9 18·59	+ 1·9858	+ ·0040	− 9	+42 33 57·2	− 9·309	+ ·260	+ 21	5, 4	18·67, 20·46	21802
1418	Gr. 2317	6·8	16 9 28·52	+ 2·1056	+ ·0034	− 2	+39 14 51·6	− 9·296	+ ·276	− 29	5, 5	20·42, 20·42	21804
1419	δ Ophi F	2·7	16 10 24·809	+ 3·1454	+ ·0080	− 33*	− 3 30 8·81	− 9·224	+ ·411	−153*	4, 5	19·45, 19·65	4134
1420	Gr. 2326	6·3	16 12 7·90	+ 0·2208	+ ·0361	− 46	+67 20 3·4	− 9·090	+ ·033	− 46	6, 6	18·78, 18·78	21852
1421	16 Herc	6·1	16 12 9·17	+ 2·6628	+ ·0038	− 38	+18 59 47·9	− 9·088	+ ·349	− 90	2, 2	19·88, 19·88	4139
1422	Pi 16h, 40	6·5	16 12 43·74	+ 2·4491	+ ·0032	− 24	+27 36 32·0	− 9·043	+ ·322	− 40	4, 5	20·50, 20·50	21879
1423	19 U. Min S	5·6	16 12 56·271	− 1·7366	+ ·1246	+ 15*	+76 4 1·08	− 9·027	− ·222	+ 7*	21, 16	20·38, 21·17	4151
1424	ν Cor. B	5·9	16 13 44·42	+ 2·4011	+ ·0031	+ 8	+29 20 6·3	− 8·964	+ ·317	− 26	2, 2	15·47, 15·47	4146
1425	Gr. 2329	7·4	16 14 7·02	+ 0·3134	+ ·0327	− 13	+66 33 46·2	− 8·935	+ ·044	− 8	2, 2	20·00, 20·00	4152
1426	ε Ophi F	3·1	16 14 21·071	+ 3·1672	+ ·0081	+ 53*	− 4 30 39·20	− 8·916	+ ·417	+ 32*	7, 21	18·22, 15·05	4147
1427	Gr. 2337	6·2	16 15 46·34	− 1·0004	+ ·0822	− 40	+73 34 42·4	− 8·805	− ·128	+ 18	3, 3	12·28, 12·28	4160
1428	B.A.C. 5452	6·3	16 16 49·02	+ 2·6034	+ ·0036	− 14	+21 18 46·2	− 8·723	+ ·345	− 57	5, 5	20·02, 20·02	21976
1429	Gr. 2332	5·8	16 16 59·99	+ 0·9978	+ ·0158	+ 11	+59 56 11·6	− 8·787	+ ·135	+ 20	3, 2	16·13, 15·97	4159
1430	Gr. 2330	6·1	16 17 5·43	+ 1·6774	+ ·0062	− 22	+49 13 0·7	− 8·702	+ ·224	+ 27	6, 6	12·23, 12·24	21974
1431	Gr. 2328	5·7	16 17 20·95	+ 2·0661	+ ·0037	− 96	+39 53 14·5	− 8·681	+ ·273	− 17	3, 4	20·49, 20·51	4161
1432	τ Herc S	3·8	16 17 29·085	+ 1·8035	+ ·0051	− 12*	+46 29 28·30	− 8·670	+ ·241	+ 30*	11, 11	18·70, 19·44	4162
1433	Gr. 2338	6·5	16 18 10·99	− 0·0272	+ ·0418	− 86	+68 43 59·1	− 8·615	+ ·000	+ 43	5, 6	15·90, 15·33	21983
1434	σ Serp	4·9	16 18 16·54	+ 3·0474	+ ·0066	−111	+ 1 12 15·4	− 8·608	+ ·405	+ 43	3, 4	12·31, 12·34	4163
1435	γ Herc F	3·7	16 18 36·649	+ 2·6492	+ ·0038	− 34*	+19 19 41·98	− 8·581	+ ·353	+ 39*	14, 27	20·01, 18·47	4165
1436	ν^1 Cor. B	5·4	16 19 31·99	+ 2·2574	+ ·0033	+ 4	+33 58 29·3	− 8·509	+ ·302	− 49	3, 3	17·46, 17·46	4173
1437	ν^2 Cor. B	5·5	16 19 39·63	+ 2·2602	+ ·0031	+ 3	+33 52 37·8	− 8·499	+ ·302	+ 55	5, 5	19·46, 19·46	4175
1438	η U. Min S	5·2	16 19 40·439	− 1·7560	+ ·1172	−188*	+75 55 43·66	− 8·497	− ·228	+252*	22, 24	21·41, 21·08	4181
1439	ω Herc	4·6	16 21 57·16	+ 2·7650	+ ·0044	+ 30	+14 12 17·8	− 8·316	+ ·370	− 65	6, 16	12·40, 12·43	4182
1440	Gr. 2347	5·6	16 21 58·38	− 0·1422	+ ·0440	− 54	+69 16 58·5	− 8·314	− ·015	− 14	6, 5	19·30, 19·47	4186
1441	25 Herc	5·7	16 22 43·88	+ 2·1363	+ ·0035	+ 3	+37 33 50·4	− 8·254	+ ·288	− 26	2, 2	14·50, 14·50	4184
1442	Gr. 2343	5·8	16 22 46·76	+ 1·3090	+ ·0101	+ 19	+55 22 30·3	− 8·250	+ ·177	+ 16	3, 4	12·78, 12·49	4187
1443	Gr. 2345	5·8	16 22 47·38	+ 0·7951	+ ·0186	− 50	+61 52 0·8	− 8·250	+ ·110	+ 32	2, 2	15·04, 15·04	4191
1444	η Drac S	2·7	16 22 58·248	+ 0·8117	+ ·0184	− 25*	+61 41 1·75	− 8·235	+ ·111	+ 59*	12, 12	17·50, 18·17	4192
1445	Gr. 2350	7·2	16 26 7·43	+ 1·5176	+ ·0075	− 21	+51 45 23·5	− 7·983	+ ·206	+ 8	5, 5	19·83, 19·83	Gr² 6633
1446	g Herc	5·0	16 26 10·63	+ 1·9672	+ ·0041	+ 20	+42 2 45·3	− 7·979	+ ·266	− 18	3, 4	12·47, 13·26	4201
1447	Gr. 2351	6·4	16 26 48·47	+ 1·5259	+ ·0073	+ 26	+51 34 16·6	− 7·928	+ ·208	− 4	6, 6	15·00, 15·00	22185
1448	β Herc F	2·6	16 26 59·702	+ 2·5854	+ ·0036	− 75*	+21 39 7·19	− 7·913	+ ·350	− 24*	19, 26	17·99, 17·87	4204
1449	λ Ophi	4·0	16 27 7·75	+ 3·0268	+ ·0062	− 32	+ 2 8 48·2	− 7·902	+ ·409	− 84	1, 4	12·28, 12·34	4203
1450	B.A.C. 5530	6·0	16 28 0·85	+ 2·5669	+ ·0035	− 10	+22 21 20·6	− 7·831	+ ·348	− 4	5, 4	18·48, 20·23	22216

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			h	m	s	s	s		°	′	″	″	″				
1451	A Drac.....S	5·1	16	28	7·208	− 0·1208	+ ·0405	− 45*	+68	55	49·83	− 7·822	− ·013	+ 34*	11, 12	15·24, 16·26	4213
1452	BD + 35° 2828.....	6·6	16	28	17·84	+ 2·1986	+ ·0033	+ 5	+35	23	9·0	− 7·808	+ ·298	− 32	5, 5	20·22, 20·22	22224
1453	BD + 45° 2422.....	5·7	16	29	31·71	+ 1·8062	+ ·0049	− 4	+45	45	21·8	− 7·708	+ ·246	+ 28	5, 5	12·23, 12·03	4214
1454	Pi 16h, 182.....	5·8	16	29	51·99	− 3·3517	+ ·1987	−368	+79	7	29·1	− 7·682	− ·448	+113	8, 10	14·63, 14·34	4223
1455	Pi 16h, 140.....	6·0	16	31	21·77	+ 0·8419	+ ·0165	+ 19	+60	58	48·7	− 7·560	+ ·117	− 16	2, 3	12·50, 12·82	4221
1456	σ Herc.....S	4·2	16	31	41·034	+ 1·9345	+ ·0042	− 10*	+42	35	27·07	− 7·535	+ ·264	+ 35*	11, 14	17·45, 16·31	4220
1457	BD + 72° 734.....	6·5	16	32	36·49	− 0·9262	+ ·0654	−103	+72	46	2·5	− 7·460	− ·122	+ 38	11, 9	19·86, 19·54	22290
1458	ζ Ophi.....F	2·5	16	33	1·602	+ 3·3010	+ ·0086	+ 8*	−10	24	59·09	− 7·426	+ ·450	+ 17*	17, 33	19·30, 17·97	4225
1459	Pi 16h, 195.....	6·5	16	33	50·91	− 2·5791	+ ·1423	−299	+77	35	49·5	− 7·359	− ·347	+270	3, 4	13·84, 13·26	4234
1460	Gr. 2362.....	6·1	16	33	59·80	+ 1·7504	+ ·0052	− 15	+46	45	51·8	− 7·347	+ ·240	+ 12	2, 4	16·40, 15·12	4228
1461	Gr. 2370.....	6·1	16	36	9·33	+ 0·5998	+ ·0202	+ 2	+63	13	25·2	− 7·171	+ ·085	− 91	11, 11	12·25, 12·16	22382
1462	Gr. 2369.....	5·5	16	36	29·40	+ 1·2104	+ ·0104	− 18	+56	9	41·7	− 7·143	+ ·168	+ 82	3, 5	14·10, 12·84	4240
1463	42 Herc.....	5·1	16	36	42·68	+ 1·6322	+ ·0060	− 36	+49	4	27·6	− 7·125	+ ·225	+ 27	2, 2	12·44, 12·44	4242
1464	B.A.C. 5597.....	6·1	16	37	53·98	+ 2·4891	+ ·0033	− 22	+25	0	8·9	− 7·028	+ ·342	0	6, 7	17·97, 17·78	22452
1465	39 Herc.....	6·1	16	38	34·12	+ 2·4328	+ ·0034	− 2	+27	3	38·1	− 6·973	+ ·336	− 49	4, 3	13·80, 14·22	4247
1466	η Herc.....S	3·5	16	40	19·404	+ 2·0531	+ ·0037	+ 29*	+39	3	50·72	− 6·829	+ ·284	− 95*	18, 19	14·66, 14·76	4255
1467	g Drac.....	5·0	16	40	23·67	+ 0·4108	+ ·0228	+ 6	+64	43	52·1	− 6·823	+ ·059	− 17	5, 4	12·62, 12·89	4259
1468	Pi 16h, 177.....	6·2	16	41	5·66	+ 2·2187	+ ·0033	− 60	+34	10	33·4	− 6·766	+ ·307	+ 50	7, 7	19·85, 19·85	4258
1469	Gr. 2374.....	6·4	16	41	26·17	+ 1·2190	+ ·0098	+ 58	+55	49	38·0	− 6·737	+ ·169	+ 77	5, 4	13·62, 13·38	4263
1470	BD + 79° 511.....	6·4	16	42	6·88	− 3·4450	+ ·1757	− 76	+79	3	37·3	− 6·682	− ·471	+ 33	11, 12	17·42, 16·59	22491
1471	BD + 43° 2642.....	5·9	16	42	50·61	+ 1·8819	+ ·0043	− 18	+43	21	15·2	− 6·622	+ ·262	− 52	8, 7	13·89, 14·09	22564
1472	Gr. 2377.....	5·0	16	43	52·26	+ 1·1338	+ ·0106	+ 33	+56	54	55·9	− 6·536	+ ·159	+ 56	17, 18	13·69, 13·50	4270
1473	Gr. 2376.....	6·4	16	44	55·69	+ 1·9186	+ ·0041	− 2	+42	22	18·5	− 6·449	+ ·268	− 29	5, 5	15·70, 15·70	22611
1474	48 Herc.....	6·9	16	46	20·24	+ 2·3381	+ ·0031	− 53	+30	5	31·5	− 6·333	+ ·327	+ 75	4, 4	13·78, 13·78	4279
1475	Gr. 2391.....	6·3	16	46	24·84	− 2·7156	+ ·1274	+168	+77	38	37·6	− 6·326	− ·373	+206	3, 3	14·65, 14·65	4293
1476	k Herc.....	5·7	16	46	40·75	+ 2·9086	+ ·0047	+ 35	+ 7	22	34·1	− 6·304	+ ·405	− 8	3, 3	12·36, 12·36	4280
1477	52 Herc.....	4·9	16	47	2·40	+ 1·7533	+ ·0049	+ 21	+46	6	48·3	− 6·274	+ ·245	− 73	6, 7	12·25, 12·03	4284
1478	Gr. 2381.....	6·3	16	47	20·61	+ 1·8654	+ ·0043	− 20	+43	33	31·7	− 6·249	+ ·261	− 14	8, 8	12·22, 12·22	22671
1479	BD + 32° 2795.....	6·8	16	47	53·57	+ 2·2577	+ ·0033	+ 12	+32	40	46·1	− 6·203	+ ·316	+ 39	7, 8	17·49, 17·71	22685
1480	Gr. 2383.....	6·6	16	48	11·87	+ 1·9273	+ ·0040	− 70	+42	1	18·1	− 6·178	+ ·270	+ 64	8, 7	20·32, 20·29	22694
1481	49 Herc.....S	6·7	16	48	39·909	+ 2·7296	+ ·0039	+ 6*	+15	5	56·32	− 6·139	+ ·381	− 7*	17, 17	19·19, 19·19	4291
1482	53 Herc.....	5·6	16	50	7·45	+ 2·2817	+ ·0032	− 75	+31	49	29·7	− 6·017	+ ·320	− 23	8, 8	12·10, 12·21	4300
1483	Gr. 2389.....	7·0	16	51	9·87	+ 1·8845	+ ·0041	+105	+42	57	15·2	− 5·930	+ ·263	−330	2, 2	13·44, 13·44	4305
1484	BD + 47° 2400.....	6·3	16	51	11·96	+ 1·6780	+ ·0052	− 39	+47	32	9·6	− 5·927	+ ·236	+ 99	7, 6	12·06, 12·14	22782
1485	Gr. 2390.....	7·2	16	53	0·26	+ 0·8127	+ ·0136	+ 57	+60	28	55·1	− 5·776	+ ·116	− 12	4, 4	20·39, 20·39	4314
1486	ε U. Min.....P	4·5	16	53	35·582	− 6·2313	+ ·3228	+ 72*	+82	09	47·51	− 5·727	− ·868	− 1*	155, 96	17·85, 16·63	4327
1487	BD + 14° 3155.....	6·5	16	54	5·86	+ 2·7534	+ ·0039	− 61	+13	59	53·0	− 5·685	+ ·387	+ 65	5, 4	19·65, 19·21	22861
1488	κ Oph.....F	3·2	16	54	7·014	+ 2·8586	+ ·0043	−199*	+ 9	29	25·74	− 5·683	+ ·402	− 15*	2, 8	17·96, 15·85	4315
1489	Pi 16h, 258.....	5·8	16	54	35·51	+ 2·4885	+ ·0032	+ 3	+24	29	47·7	− 5·643	+ ·350	− 31	5, 6	20·67, 20·81	22870
1490	Gr. 2392.....	6·9	16	55	28·25	+ 1·8913	+ ·0041	− 11	+42	37	38·7	− 5·570	+ ·267	− 59	5, 5	17·68, 17·68	22882
1491	20 Drac.....	6·8	16	56	2·77	+ 0·2986	+ ·0209	− 72	+65	9	11·7	− 5·521	+ ·045	+ 30	2, 2	14·96, 14·96	4325
1492	ε Herc.....S	3·8	16	57	25·137	+ 2·2985	+ ·0032	− 36*	+31	2	9·10	− 5·406	+ ·325	+ 21*	16, 16	18·30, 18·30	4328
1493	Gr. 2411.....	6·2	16	57	45·37	− 1·2016	+ ·0543	− 7	+73	14	30·1	− 5·377	− ·167	− 25	11, 11	17·56, 17·56	22910
1494	Pi 16h, 291.....	6·3	16	57	58·91	+ 1·1052	+ ·0094	− 57	+56	47	53·5	− 5·358	+ ·158	+ 26	5, 3	14·91, 15·15	4330
1495	d Herc.....	5·4	16	58	50·18	+ 2·2139	+ ·0032	0	+33	40	34·6	− 5·286	+ ·314	− 12	1, 1	12·31, 11·54	4332
1496	BD + 25°, 3183.....	6·1	16	59	14·15	+ 2·4546	+ ·0032	+ 38	+25	36	36·8	− 5·252	+ ·348	+ 84	6, 6	18·36, 18·69	22985
1497	BD + 60° 1728.....	6·4	17	0	19·56	+ 0·7667	+ ·0129	− 76	+60	45	16·2	− 5·160	+ ·110	+ 55	5, 5	14·28, 14·28	22998
1498	BD + 34° 2890.....	5·9	17	1	11·02	+ 2·1713	+ ·0032	− 58	+34	53	38·8	− 5·088	+ ·308	− 9	12, 13	18·57, 18·72	23037
1499	BD + 64° 1170.....	6·1	17	1	50·33	+ 0·3358	+ ·0186	− 82	+64	42	16·2	− 5·032	+ ·050	+ 23	5, 4	14·89, 14·96	23035
1500	60 Herc.....	4·9	17	1	53·90	+ 2·7779	+ ·0038	+ 36	+12	50	34·0	− 5·027	+ ·394	− 17	4, 17	12·16, 12·31	4346

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			h m s	s	s		° ′ ″	″	″				
1501	Pi 16h, 307	6·7	17 2 47·82	+ 1·8261	+ ·0042	− 8	+43 54 48·1	− 4·952	+ ·260	− 14	5, 5	20·43, 20·43	4349
1502	Pi 16h, 310	6·4	2 50·28	+ 1·5880	+ ·0053	+ 36	+48 54 25·3	− 4·948	+ ·226	− 82	5, 6	13·50, 13·50	4351
1503	μ Drac	5·1	3 46·86	+ 1·2509	+ ·0075	− 83	+54 34 6·3	− 4·868	+ ·178	+ 81	4, 4	13·49, 13·49	4354
1504	Gr. 2427	6·1	4 0·77	− 1·9057	+ ·0692	+ 30	+75 24 8·3	− 4·848	− ·268	− 85	12, 10	16·30, 16·13	23066
1505	Gr. 2415	6·4	5 19·87	+ 1·9594	+ ·0036	− 25	+40 36 47·9	− 4·736	+ ·280	− 28	16, 16	13·99, 14·22	4359
1506	Pi 17h, 3	5·6	17 5 22·51	+ 2·1282	+ ·0033	− 16	+36 1 54·5	− 4·732	+ ·303	− 23	8, 8	15·64, 15·64	4358
1507	η Ophi F	2·4	6 4·511	+ 3·4364	+ ·0071	+ 25*	−15 37 59·73	− 4·673	+ ·489	+ 86*	29, 38	20·19, 20·04	4360
1508	BD + 40° 3019	5·3	7 7·42	+ 1·9471	+ ·0037	− 47	+40 52 12·7	− 4·584	+ ·279	− 03	6, 7	14·03, 13·96	4364
1509	63 Herc	6·5	7 56·77	+ 2·4842	+ ·0031	− 12	+24 19 41·1	− 4·514	+ ·354	+ 14	1, 2	12·52, 12·02	4365
1510	ζ Drac S	3·1	8 33·925	+ 0·1730	+ ·0190	− 21*	+65 48 25·10	− 4·461	+ ·026	+ 20*	24, 22	15·05, 15·36	4368
1511	BD + 52° 2032	6·2	17 8 47·48	+ 1·3745	+ ·0063	− 14	+52 29 59·8	− 4·442	+ ·197	− 13	8, 8	12·11, 12·11	23200
1512	BD + 49° 2604	6·5	9 45·36	+ 1·5274	+ ·0053	+ 18	+49 50 6·4	− 4·359	+ ·219	+ 28	4, 4	12·68, 12·68	23229
1513	α Herc	3·5	11 13·6	+ 2·7356	+ ·0034	− 8	+14 28 28·7	− 4·234	+ ·392	+ 27	0, 3	. 12·30	4373
1514	Pi 17h, 61	5·6	11 53·58	+ 0·5122	+ ·0137	+ 15	+62 57 34·9	− 4·177	+ ·075	+ 46	3, 5	13·85, 13·91	4382
1515	δ Herc S	3·1	11 57·026	+ 2·4654	+ ·0030	− 18*	+24 55 36·08	− 4·172	+ ·353	−163*	14, 15	19·71, 19·35	4376
1516	π Herc S	3·2	17 12 26·038	+ 2·0913	+ ·0032	− 21*	+36 53 34·28	− 4·130	+ ·300	− 2*	25, 27	14·47, 14·82	4381
1517	Pi 17h, 37	6·0	12 34·44	+ 2·4953	+ ·0030	− 20	+23 49 31·0	− 4·118	+ ·358	+ 17	12, 11	18·50, 18·50	23309
1518	BD + 23° 3074	6·7	14 27·37	+ 2·5121	+ ·0030	− 3	+23 10 13·6	− 3·957	+ ·361	− 6	8, 9	20·12, 20·17	23360
1519	μ Herc	5·0	14 33·29	+ 2·2161	+ ·0030	− 16	+33 10 47·6	− 3·949	+ ·318	− 13	8, 7	12·15, 12·24	4388
1520	Gr. 2432	6·8	15 9·90	+ 0·7281	+ ·0108	+ 8	+60 47 36·9	− 3·896	+ ·106	+ 30	7, 7	14·84, 15·24	23358
1521	Gr. 2433	6·7	17 15 34·71	+ 0·7314	+ ·0107	− 60	+60 44 59·9	− 3·861	+ ·106	+ 11	8, 7	14·12, 13·79	4396
1522	Pi 17h, 64	6·0	15 51·99	+ 2·3488	+ ·0030	+ 32	+28 54 1·6	− 3·837	+ ·338	− 15	5, 5	20·27, 20·27	4393
1523	Gr. 2431	5·9	15 52·11	+ 2·0150	+ ·0033	− 16	+38 53 14·1	− 3·836	+ ·290	+ 71	5, 5	12·09, 11·88	23390
1524	Pi 17h, 71	5·6	17 6·37	+ 2·4434	+ ·0030	+ 14	+25 36 46·2	− 3·730	+ ·351	− 19	7, 7	20·22, 20·22	4401
1525	ω Herc	5·5	17 51·00	+ 2·2338	+ ·0030	+101	+32 33 47·2	− 3·666	+ ·322	−1053	1, 2	12·53, 12·43	4403
1526	74 Herc	5·8	17 18 13·98	+ 1·6969	+ ·0041	− 31	+46 18 49·8	− 3·633	+ ·244	+ 38	4, 4	12·96, 12·96	4408
1527	BD + 48° 2506	6·7	18 31·86	+ 1·5994	+ ·0045	+188	+48 15 44·1	− 3·607	+ ·231	− 27	7, 6	12·24, 12·23	23461
1528	BD + 28° 2728	6·6	18 34·86	+ 2·3492	+ ·0029	0	+28 49 50·1	− 3·603	+ ·338	+ 1	8, 8	20·20, 20·20	23474
1529	Gr 2435	5·7	19 15·90	+ 1·9673	+ ·0034	+ 5	+40 2 52·2	− 3·544	+ ·284	− 77	9, 9	15·19, 15·19	4411
1530	BD + 53° 1937	6·0	20 7·88	+ 1·2947	+ ·0059	+ 21	+53 29 28·6	− 3·469	+ ·187	− 7	7, 9	12·53, 12·42	23505
1531	73 Herc	5·9	17 20 58·27	+ 2·5131	+ ·0030	− 34	+23 1 45·1	− 3·397	+ ·361	− 42	6, 7	20·19, 20·10	4416
1532	ρ Herc	4·6	21 5·69	+ 2·0726	+ ·0031	− 32	+37 12 51·3	− 3·386	+ ·299	− 4	4, 5	15·21, 15·06	4419
1533	Pi 17h, 94	6·1	21 10·87	+ 2·7032	+ ·0031	+ 4	+15 40 23·4	− 3·379	+ ·390	+ 9	5, 6	19·11, 19·33	23559
1534	Gr. 2436	6·4	21 30·75	+ 2·0192	+ ·0032	− 13	+38 38 58·5	− 3·350	+ ·292	+ 33	5, 6	19·50, 19·34	23560
1535	Br. 2208	6·7	21 51·27	+ 2·0791	+ ·0030	− 33	+37 1 3·8	− 3·321	+ ·299	+ 35	6, 6	15·16, 15·16	4422
1536	Pi 17h, 99	4·6	17 22 39·09	+ 3·1887	+ ·0044	− 62	− 5 1 18·0	− 3·252	+ ·460	− 49	2, 10	12·45, 12·40	4423
1537	σ Ophi F	4·5	22 47·548	+ 2·9759	+ ·0036	+ 2*	+ 4 12 15·81	− 3·240	+ ·429	+ 3*	26, 43	20·32, 19·98	4425
1538	Pi 17h, 109	5·6	23 34·83	+ 2·5888	+ ·0029	+ 7	+20 8 37·7	− 3·172	+ ·374	+ 12	3, 3	16·54, 16·54	4427
1539	BD + 34° 2971	6·0	24 4·43	+ 2·1569	+ ·0030	− 31	+34 45 27·6	− 3·129	+ ·312	+ 37	6, 7	20·46, 20·45	23647
1540	B.A.C. 5917	5·7	24 43·02	+ 0·7754	+ ·0088	0	+60 6 39·4	− 3·074	+ ·113	+ 35	4, 4	13·00, 13·00	4432
1541	χ Herc	6·0	17 24 44·88	+ 1·5895	+ ·0043	0	+48 19 20·5	− 3·071	+ ·230	− 15	25, 25	14·48, 14·06	4430
1542	Pi 17h, 139	6·6	24 57·18	+ 0·8994	+ ·0078	− 11	+58 42 50·7	− 3·053	+ ·131	+ 12	8, 7	19·04, 19·12	23654
1543	Gr. 2456	5·9	25 16·61	− 4·5786	+ ·1109	+ 64	+80 12 15·8	− 3·025	− ·659	0	14, 15	14·55, 14·99	23599
1544	λ Herc	4·7	27 42·37	+ 2·4227	+ ·0028	+ 11	+26 9 57·4	− 2·815	+ ·351	+ 14	6, 5	12·39, 12·38	4438
1545	Pi 17h, 143	6·0	28 4·91	+ 2·2709	+ ·0028	+ 6	+31 12 47·1	− 2·783	+ ·329	+ 4	10, 10	18·50, 19·30	4440
1546	β Drac S	2·8	17 28 44·183	+ 1·3564	+ ·0050	− 15*	+52 21 23·09	− 2·726	+ ·197	+ 7*	13, 14	15·56, 15·70	4443
1547	78 Herc	5·9	28 52·82	+ 2·3551	+ ·0027	+ 7	+28 27 38·8	− 2·714	+ ·341	+ 24	4, 4	18·55, 18·55	4441
1548	BD + 57° 1774	5·9	29 31·40	+ 0·9588	+ ·0069	+ 35	+57 55 53·7	− 2·658	+ ·140	− 34	5, 4	15·26, 15·98	23758
1549	ν^1 Drac S	5·0	30 41·843	+ 1·1633	+ ·0056	+176*	+55 14 6·08	− 2·556	+ ·169	+ 49*	11, 11	20·41, 20·41	4458
1550	ν^2 Drac S	5·0	30 47·234	+ 1·1640	+ ·0056	+184*	+55 13 24·83	− 2·548	+ ·169	+ 52*	9, 10	20·52, 20·52	4460

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			h m s	s	s		° ′ ″	″	″				
1551	α Ophi.....F	2·0	17 31 27·114	+ 2·7761	+ ·0029	+ 80*	+12 36 48·66	− 2·490	+ ·403	−235*	21, 46	17·39, 16·78	4459
1552	ζ Drac.....S	5·3	32 15·658	− 0·2409	+ ·0152	− 26*	+68 10 58·76	− 2·420	− ·034	+137*	11, 11	20·95, 20·95	4464
1553	BD + 57° 1780.....	6·3	32 17·70	+ 0·9818	+ ·0064	+ 16	+57 36 28·1	− 2·417	+ ·143	+ 10	5, 5	18·55, 18·55	23838
1554	Pi 17h, 163.....	6·1	32 47·31	+ 2·5623	+ ·0028	+ 9	+21 2 35·0	− 2·374	+ ·372	− 25	2, 4	19·52, 19·55	4461
1555	BD + 37° 2908.....	5·9	33 7·66	+ 2·0600	+ ·0029	+ 10	+37 20 53·3	− 2·345	+ ·299	− 16	5, 5	19·55, 19·55	23863
1556	BD + 27° 2849.....	7·0	17 33 22·98	+ 2·3785	+ ·0027	+ 18	+27 36 50·4	− 2·323	+ ·345	− 75	5, 5	20·34, 20·34	23872
1557	Pi 17h, 176.....	5·7	33 45·40	+ 2·2805	+ ·0027	+ 21	+30 49 49·6	− 2·290	+ ·331	− 11	5, 5	18·54, 18·54	23879
1558	79 Herc.....	6·0	34 25·69	+ 2·4717	+ ·0027	− 17	+24 21 13·1	− 2·232	+ ·359	− 3	2, 2	18·08, 18·08	4468
1559	ψ Herc.....	5·7	34 39·89	+ 1·5648	+ ·0038	+ 23	+48 37 42·7	− 2·211	+ ·228	+ 53	3, 3	20·50, 20·50	4471
1560	BD + 69° 930.....	6·0	36 3·84	− 0·4521	+ ·0154	+ 33	+69 20 30·3	− 2·090	− ·065	+ 13	5, 5	19·93, 19·93	23907
1561	Pi 17h, 196.....	6·4	17 37 7·52	+ 2·2662	+ ·0026	− 13	+31 14 28·7	− 1·997	+ ·330	+ 10	6, 5	20·05, 19·75	23967
1562	BD + 69° 933.....	6·5	37 18·10	− 0·5060	+ ·0152	−123	+69 37 2·4	− 1·982	− ·072	−209	6, 7	19·38, 19·42	23939
1563	ι Herc.....S	3·8	37 20·791	+ 1·6936	+ ·0034	− 8*	+46 2 43·64	− 1·978	+ ·246	− 2*	11, 10	18·54, 18·94	4479
1564	Pi 17h, 204.....	7·0	37 51·71	+ 2·2632	+ ·0026	− 56	+31 19 36·5	− 1·933	+ ·329	− 77	4, 4	21·07, 21·07	23984
1565	Br. 2228.....	6·6	38 0·58	+ 2·4652	+ ·0025	− 13	+24 32 57·1	− 1·920	+ ·358	+ 49	2, 2	19·56, 19·56	4480
1566	Gr. 2457.....	6·6	17 38 21·30	+ 1·8101	+ ·0031	+ 48	+43 30 24·5	− 1·890	+ ·263	+ 56	5, 6	20·19, 20·42	23993
1567	BD + 72° 800.....	6·0	38 33·77	− 1·1458	+ ·0203	+ 38	+72 29 45·4	− 1·872	− ·166	+ 19	11, 11	18·97, 18·97	23968
1568	BD + 51° 2243.....	6·2	39 38·56	+ 1·3781	+ ·0041	− 34	+51 51 13·7	− 1·778	+ ·201	− 20	4, 5	18·26, 16·92	24025
1569	β Ophi.....F	2·9	39 46·000	+ 2·9658	+ ·0028	− 28*	+ 4 35 50·53	− 1·767	+ ·431	+152*	24, 54	16·91, 15·46	4487
1570	Gr. 2459.....	6·0	40 52·13	+ 1·7816	+ ·0031	− 38	+44 6 58·7	− 1·671	+ ·259	+ 38	5, 5	16·93, 16·93	24067
1571	BD + 53° 1978.....	5·8	17 42 25·19	+ 1·2501	+ ·0041	+ 28	+53 49 58·3	− 1·536	+ ·183	− 35	5, 4	13·30, 12·98	4494
1572	ψ Drac.....S	5·0	43 16·042	− 1·0748	+ ·0161	+ 36*	+72 11 10·17	− 1·462	− ·156	−267*	23, 26	17·45, 17·33	4504
1573	Br. 2252.....	6·1	43 17·69	− 1·0772	+ ·0161	+ 50	+72 11 43·3	− 1·460	− ·156	−278	3, 5	14·54, 13·36	4505
1574	Gr. 2464.....	6·2	43 23·80	+ 1·9969	+ ·0027	+ 3	+38 54 36·5	− 1·451	+ ·291	− 38	6, 7	19·23, 19·00	24128
1575	Gr. 2465.....	6·5	43 29·82	+ 1·9799	+ ·0027	+ 6	+39 21 0·5	− 1·442	+ ·288	+ 11	5, 5	20·29, 20·29	24131
1576	μ Herc.....S	3·4	17 43 31·324	+ 2·3711	+ ·0025	−243*	+27 45 49·44	− 1·440	+ ·345	−751*	13, 10	14·95, 15·36	4497
1577	BD + 17° 3334.....	5·8	43 49·36	+ 2·6468	+ ·0025	− 8	+17 43 25·5	− 1·414	+ ·385	− 27	3, 4	20·19, 20·04	4499
1578	γ Ophi.....F	3·8	44 7·873	+ 3·0091	+ ·0027	− 18*	+ 2 44 3·61	− 1·387	+ ·438	− 79*	15, 38	19·57, 18·07	4500
1579	30 Drac.....	5·2	47 16·87	+ 1·4370	+ ·0034	− 55	+50 47 50·9	− 1·112	+ ·210	+202	4, 6	12·02, 12·02	4511
1580	BD + 29° 3126.....	5·8	47 28·38	+ 2·3228	+ ·0024	+ 21	+29 20 27·9	− 1·095	+ ·339	+ 40	6, 7	11·99, 12·04	4510
1581	BD + 22 3227.....	5·9	17 47 38·84	+ 2·5245	+ ·0024	+ 7	+22 20 11·3	− 1·080	+ ·368	− 21	5, 5	17·94, 17·94	24251
1582	Pi 17h, 280.....	7·0	48 47·82	+ 1·9492	+ ·0026	− 15	+40 5 25·9	− 0·980	+ ·284	+ 7	7, 7	17·95, 17·81	24279
1583	Br. 2245.....	6·2	49 38·17	+ 1·9527	+ ·0026	− 11	+39 59 51·0	− 0·906	+ ·285	+ 49	1, 1	16·56, 16·56	4518
1584	Gr. 2481.....	6·5	49 56·22	+ 1·6580	+ ·0029	+ 34	+46 39 46·7	− 0·880	+ ·242	−129	5, 5	11·92, 11·92	24317
1585	ζ Herc.....	5·2	50 51·40	+ 1·9515	+ ·0025	+ 11	+40 1 17·0	− 0·799	+ ·285	+ 47	1, 1	16·53, 16·53	4522
1586	ξ Drac.....S	3·8	17 52 13·802	+ 1·0253	+ ·0037	+119*	+56 53 2·69	− 0·679	+ ·150	+ 75*	21, 17	15·16, 15·60	4531
1587	89 Herc.....	5·8	52 23·64	+ 2·4196	+ ·0023	+ 1	+26 3 38·6	− 0·665	+ ·353	+ 2	1, 2	11·51, 11·92	4528
1588	θ Herc.....S	3·8	53 40·791	+ 2·0567	+ ·0024	+ 3*	+37 15 34·67	− 0·553	+ ·300	+ 4*	12, 12	17·56, 17·56	4535
1589	BD + 55° 1995.....	6·0	54 1·17	+ 1·0939	+ ·0034	+ 37	+55 58 41·6	− 0·523	+ ·159	+116	5, 5	14·28, 14·28	24410
1590	BD + 24° 3283.....	7·0	54 8·50	+ 2·4780	+ ·0022	− 20	+24 0 7·2	− 0·512	+ ·361	+ 72	5, 5	19·35, 19·35	24423
1591	BD + 78° 616.....	6·4	17 54 23·67	− 3·3899	+ ·0163	+ 52	+78 19 13·3	− 0·490	− ·494	+ 16	8, 7	20·68, 20·32	24370
1592	Gr. 2491.....	6·2	54 39·28	+ 1·7200	+ ·0026	+ 4	+45 21 33·7	− 0·467	+ ·251	− 33	4, 5	17·30, 16·15	24428
1593	γ Drac.....S	2·2	54 51·782	+ 1·3934	+ ·0029	− 9*	+51 29 49·75	− 0·449	+ ·203	− 26*	10, 10	20·68, 20·68	4541
1594	ν Ophi.....F	3·4	54 53·974	+ 3·3027	+ ·0022	− 8*	− 9 45 56·32	− 0·446	+ ·481	−118*	13, 36	15·41, 15·32	4536
1595	BD + 36° 2986.....	6·0	56 5·29	+ 2·0915	+ ·0024	+ 2	+36 17 37·0	− 0·342	+ ·305	− 60	5, 5	20·36, 20·36	24488
1596	δ U. Min.....P	4·3	17 56 25·156	−19·5101	+ ·1194	+ 19*	+86 36 50·46	− 0·313	−2·844	+ 49*	150, 96	18·08, 16·98	4591
1597	34 Drac.....	5·8	56 29·02	+ 1·0425	+ ·0062	+ 19	+72 0 46·9	− 0·308	− ·152	− 3	2, 2	13·34, 13·34	4554
1598	Gr. 2494.....	6·1	56 43·64	+ 1·7141	+ ·0026	− 1	+45 28 47·0	− 0·286	+ ·250	+ 22	5, 5	18·97, 18·97	24495
1599	67 Ophi.....F	4·0	56 53·277	+ 3·0043	+ ·0020	+ 1*	+ 2 56 2·59	− 0·272	+ ·438	− 14*	10, 14	15·56, 15·59	4548
1600	Pi 17h, 353.....	6·0	57 47·63	+ 1·7128	+ ·0025	− 6	+45 30 15·6	− 0·193	+ ·250	− 44	3, 3	17·62, 17·62	4558

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			h	m	s	s	s		°	′	″	″	″				
1601	Pi 17h, 347	6·1	17	57	51·46	+ 2·1979	+ ·0023	− 6	+33	12	56·7	− 0·187	+ ·320	− 24	5, 5	20·75, 20·75	24523
1602	BD + 33° 3009	6·4	17	58	51·04	+ 2·1947	+ ·0023	+ 16	+33	18	37·7	− 0·101	+ ·320	+ 24	5, 5	19·76, 19·76	24554
1603	96 Herc	5·4	17	59	10·62	+ 2·5643	+ ·0021	− 1	+20	49	57·4	− 0·071	+ ·374	− 18	1, 1	15·51, 15·51	4562
1604	97 Herc	6·5	17	59	21·99	+ 2·5077	+ ·0021	− 5	+22	55	17·9	− 0·056	+ ·365	− 1	3, 4	20·55, 20·30	4563
1605	Gr. 2502	6·6	18	1	11·30	+ 1·5645	+ ·0024	+ 23	+48	27	36·4	+ 0·104	+ ·229	+ 6	2, 2	13·57, 13·57	4572
1606	BD + 21° 3300	7·1	18	2	19·27	+ 2·5427	+ ·0020	+ 8	+21	38	21·8	+ 0·203	+ ·370	+ 5	5, 5	20·55, 20·55	24654
1607	BD + 32° 3047	6·0	18	3	2·09	+ 2·2306	+ ·0022	+ 6	+32	13	23·0	+ 0·265	+ ·325	− 31	5, 5	20·36, 20·38	24671
1608	72 Ophi F	3·7	18	3	47·601	+ 2·8480	+ ·0018	− 42*	+ 9	33	7·63	+ 0·332	+ ·415	+ 82*	21, 45	19·72, 19·17	4581
1609	Br. 2280	6·2	18	4	47·99	+ 2·4186	+ ·0020	− 16	+26	5	21·6	+ 0·420	+ ·352	+ 20	2, 1	19·02, 17·57	4587
1610	Br. 2279	6·2	18	4	48·13	+ 2·4187	+ ·0020	− 2	+26	5	5·9	+ 0·420	+ ·352	+ 28	2, 1	16·63, 20·48	4586
1611	BD + 50° 2525	6·9	18	5	5·79	+ 1·4343	+ ·0022	− 3	+50	48	35·2	+ 0·446	+ ·209	+ 99	5, 4	18·17, 19·83	24714
1612	Gr. 2517	5·2	18	5	13·13	+ 1·8070	+ ·0021	+ 13	+43	27	5·9	+ 0·457	+ ·264	− 64	3, 4	17·56, 17·06	4589
1613	Pi 18h, 23	6·9	18	5	15·76	− 0·0646	+ ·0012	+ 30	+66	56	8·9	+ 0·460	− ·010	+ 14	5, 5	20·75, 20·75	24704
1614	BD + 36° 3027	5·7	18	5	26·16	+ 2·0881	+ ·0022	− 72	+36	23	35·5	+ 0·476	+ ·304	−194	3, 3	19·88, 19·88	4593
1615	102 Herc	4·4	18	5	32·97	+ 2·5653	+ ·0020	− 1	+20	48	6·0	+ 0·486	+ ·374	− 17	2, 2	20·52, 20·52	4590
1616	101 Herc	5·2	18	5	38·83	+ 2·5857	+ ·0020	− 2	+20	1	56·9	+ 0·494	+ ·377	− 27	2, 2	20·54, 20·54	4592
1617	40 Drac	6·3	18	5	39·41	− 4·4979	− ·0116	+196	+79	59	33·7	+ 0·495	− ·656	+123	8, 8	14·51, 14·35	4602
1618	41 Drac	6·0	18	5	45·48	− 4·5004	− ·0119	+167	+79	59	45·0	+ 0·504	− ·656	+114	5, 9	15·36, 14·46	4603
1619	Pi 18h, 6	7·2	18	6	18·10	+ 2·2875	+ ·0021	+ 51	+30	27	8·1	+ 0·551	+ ·333	+128	6, 6	15·60, 15·60	24758
1620	BD + 16° 3390	6·2	18	6	47·77	+ 2·6781	+ ·0018	− 6	+16	27	40·6	+ 0·594	+ ·390	− 12	5, 5	19·56, 19·56	24777
1621	BD + 38° 3095	5·8	18	7	8·56	+ 2·0120	+ ·0021	−265	+38	27	10·8	+ 0·625	+ ·293	−475	6, 5	19·71, 19·55	24778
1622	Gr. 2527	6·2	18	8	59·20	+ 1·2171	+ ·0019	+133	+54	15	47·2	+ 0·785	+ ·177	+248	6, 4	12·87, 13·53	4609
1623	BD + 33° 3044	5·9	18	9	0·57	+ 2·1914	+ ·0021	+ 6	+33	25	40·3	+ 0·788	+ ·319	+ 5	5, 6	11·92, 12·03	24829
1624	BD + 21° 3347	6·0	18	10	5·83	+ 2·5373	+ ·0019	+ 42	+21	51	28·3	+ 0·883	+ ·367	+ 46	6, 6	20·35, 20·35	24869
1625	BD + 60° 1813	6·4	18	10	12·87	+ 0·7237	+ ·0010	− 18	+60	23	24·8	+ 0·893	+ ·105	+ 5	6, 5	14·57, 14·77	24848
1626	Gr. 2529	6·6	18	10	19·56	+ 1·9071	+ ·0021	− 17	+41	7	36·6	+ 0·903	+ ·277	− 50	6, 6	19·52, 19·52	24868
1627	Gr. 2530	6·2	18	10	34·66	+ 2·0014	+ ·0020	− 22	+38	45	6·4	+ 0·925	+ ·291	− 1	5, 5	20·38, 20·38	4614
1628	Gr. 2533	5·6	18	13	18·76	+ 1·8660	+ ·0020	− 5	+42	7	58·8	+ 1·164	+ ·271	− 7	23, 19	13·86, 14·22	4620
1629	Gr. 2539	6·8	18	13	22·14	+ 1·0525	+ ·0011	+ 1	+56	33	43·6	+ 1·169	+ ·153	+ 34	5, 5	20·18, 20·18	4622
1630	Gr. 2535	6·8	18	13	23·25	+ 1·7301	+ ·0020	− 68	+45	11	8·7	+ 1·170	+ ·251	−114	7, 8	16·71, 16·20	24937
1631	36 Drac S	5·1	18	13	27·866	+ 0·2920	− ·0007	+532*	+64	22	18·16	+ 1·177	+ ·042	+ 31*	12, 12	17·04, 17·20	4623
1632	BD + 23° 3299	6·0	18	15	0·11	+ 2·4994	+ ·0018	+ 2	+23	16	1·1	+ 1·311	+ ·363	− 22	7, 7	19·32, 19·32	24982
1633	37 Drac	6·3	18	15	43·24	− 0·3518	− ·0040	+ 30	+68	43	46·1	+ 1·374	− ·051	− 60	3, 1	11·59, 11·60	4634
1634	Br. 2302	6·5	18	16	58·42	+ 2·3147	+ ·0019	− 4	+29	37	58·1	+ 1·483	+ ·336	− 5	5, 4	19·12, 19·77	25025
1635	106 Herc	5·2	18	17	7·49	+ 2·5363	+ ·0018	+ 7	+21	55	43·0	+ 1·496	+ ·368	− 61	3, 3	17·57, 17·57	4636
1636	κ Lyra	4·5	18	17	14·01	+ 2·1036	+ ·0019	− 18	+36	1	46·9	+ 1·507	+ ·305	+ 31	5, 4	12·93, 13·27	4639
1637	38 Drac	7·0	18	17	25·19	− 0·3469	− ·0047	− 63	+68	42	45·9	+ 1·523	− ·051	− 90	3, 1	11·59, 11·60	4646
1638	η Serp F	3·3	18	17	25·705	+ 3·1408	+ ·0007	−375*	− 2	55	10·25	+ 1·523	+ ·456	−700*	28, 66	17·82, 17·29	4638
1639	ι Herc	5·2	18	18	5·47	+ 2·3394	+ ·0018	+ 4	+28	49	59·5	+ 1·581	+ ·340	+ 46	1, 1	13·61, 13·61	4644
1640	Gr. 2549	6·5	18	18	10·62	+ 1·4092	+ ·0013	− 35	+51	18	50·8	+ 1·588	+ ·203	− 52	1, 1	15·63, 11·53	4647
1641	Br. 2308	5·9	18	19	1·02	+ 2·5008	+ ·0017	+ 11	+23	14	45·5	+ 1·661	+ ·362	+ 75	2, 3	20·07, 17·49	4649
1642	Gr. 2555	5·3	18	19	37·55	+ 1·5367	+ ·0015	− 22	+49	4	58·7	+ 1·715	+ ·223	+ 54	7, 6	14·87, 14·74	4653
1643	109 Herc S	4·0	18	20	30·097	+ 2·5422	+ ·0016	+138*	+21	44	4·64	+ 1·791	+ ·368	−261*	18, 16	16·70, 17·34	4656
1644	μ Lyra	5·1	18	21	45·55	+ 1·9775	+ ·0019	− 18	+39	27	55·8	+ 1·900	+ ·286	− 10	8, 7	13·97, 13·97	4661
1645	φ Drac. (M) S	4·2	18	21	50·056	− 0·8569	− ·0108	− 8*	+71	17	54·06	+ 1·907	− ·125	+ 32*	23, 22	17·85, 18·86	4670
1646	BD + 27° 3016	6·5	18	21	59·55	+ 2·3847	+ ·0017	− 2	+27	21	8·4	+ 1·921	+ ·345	+ 6	7, 7	19·73, 19·73	25147
1647	χ Drac S	3·6	18	22	24·592	− 1·1973	− ·0143	+1173*	+72	42	2·73	+ 1·957	− ·175	−365*	21, 18	16·50, 16·80	4672
1648	b Drac	5·1	18	22	48·94	+ 0·8809	− ·0006	− 43	+58	45	24·2	+ 1·992	+ ·127	+ 55	2, 2	12·45, 12·45	4671
1649	Br. 2313 F	4·7	18	24	55·363	+ 3·4192	− ·0006	+ 2*	−14	36	53·69	+ 2·176	+ ·494	− 8*	22, 33	20·49, 20·31	4674
1650	Gr. 2584	7·2	18	25	38·38	+ 0·8041	− ·0013	+ 11	+59	39	30·2	+ 2·238	+ ·096	− 2	6, 6	19·07, 19·07	25214

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			h m s	s	s		° ′ ″	″	″				
1651	c Serp.	5·6	18 25 46·79	+ 3·1200	+ ·0003	+ 15	− 2 2 7·2	+ 2·250	+ ·451	− 31	2, 2	12·60, 12·60	4678
1652	Gr. 2590	6·7	18 26 40·11	+ 0·8197	− ·0014	+ 65	+59 29 55·7	+ 2·327	+ ·117	+ 35	11, 8	12·11, 12·30	4688
1653	BD + 30° 3223	5·6	18 29 57·85	+ 2·2925	+ ·0016	− 1	+30 29 48·9	+ 2·613	+ ·330	− 7	11, 7	12·01, 12·12	4702
1654	Gr. 2598	6·6	18 30 42·46	+ 1·9427	+ ·0015	+ 31	+40 28 26·7	+ 2·678	+ ·280	+ 11	5, 5	19·15, 19·15	25359
1655	1 Aqil F	4·0	18 31 7·509	+ 3·2659	− ·0006	− 15*	− 8 17 51·75	+ 2·714	+ ·470	−317*	18, 4	17·29, 16·73	4705
1656	d Drac	5·0	18 31 16·92	+ 1·0351	− ·0011	− 5	+56 59 16·6	+ 2·728	+ ·148	− 10	7, 4	13·15, 14·33	4707
1657	BD + 34° 3245	5·9	18 32 30·84	+ 2·1671	+ ·0016	+ 1	+34 23 46·6	+ 2·834	+ ·312	− 1	6, 6	20·21, 20·21	25406
1658	BD + 67° 1079	6·8	18 32 30·88	− 0·1557	− ·0099	− 28	+67 43 5·8	+ 2·834	− ·024	− 10	6, 8	21·10, 20·97	25383
1659	Br. 2339	7·3	18 32 50·87	+ 2·0082	+ ·0016	− 12	+38 49 58·9	+ 2·863	+ ·288	− 14	4, 5	20·56, 20·53	4715
1660	Gr. 2655	6·0	18 33 22·75	− 2·8860	− ·0537	− 8	+77 29 23·0	+ 2·909	− ·418	− 5	4, 5	14·27, 14·42	4724
1661	BD + 16° 3563	6·4	18 33 47·10	+ 2·6905	+ ·0011	− 42	+16 7 58·5	+ 2·944	+ ·387	−113	5, 5	19·13, 19·13	25448
1662	Br. 2412	6·2	18 34 5·53	− 7·8849	− ·2204	+ 66	+83 7 22·6	+ 2·971	−1·138	− 25	10, 8	19·42, 19·99	25334
1663	α Lyra S	0·0	18 34 23·939	+ 2·0138	+ ·0015	+173*	+38 42 47·13	+ 2·997	+ ·289	+279*	17, 14	14·35, 15·00	4722
1664	Gr. 2618	6·2	18 34 27·76	+ 1·8339	+ ·0013	+ 21	+43 9 27·3	+ 3·003	+ ·263	− 14	7, 7	12·65, 12·80	25464
1665	Pi 18h, 153	6·5	18 35 37·80	+ 1·9806	+ ·0014	0	+39 36 4·4	+ 3·104	+ ·284	+ 3	7, 7	19·60, 19·74	25502
1666	Pi 18h, 173	6·2	18 35 59·20	+ 0·1871	− ·0079	+ 15	+65 25 17·7	+ 3·135	+ ·025	+ 82	6, 5	14·08, 14·58	4727
1667	Pi 18h, 174	5·9	18 36 52·89	+ 0·5435	− ·0050	+ 10	+62 27 28·9	+ 3·212	+ ·077	+ 31	3, 2	13·58, 13·08	4730
1668	Gr. 2627	6·2	18 37 7·95	+ 1·9318	+ ·0013	+ 19	+40 51 55·5	+ 3·233	+ ·277	− 5	6, 6	15·56, 15·89	25541
1669	Pi 18h, 170	6·0	18 38 9·33	+ 1·3784	− ·0003	+ 17	+52 7 29·1	+ 3·322	+ ·197	+ 27	5, 6	13·82, 13·77	4733
1670	2 Aqil F	4·8	18 38 10·025	+ 3·2845	− ·0013	+ 9*	− 9 7 31·65	+ 3·323	+ ·471	− 4*	25, 37	20·53, 20·17	4731
1671	3 Aqil	5·1	18 39 26·16	+ 3·2661	− ·0012	+ 13	− 8 21 1·5	+ 3·432	+ ·468	+ 10	4, 6	12·56, 12·52	4736
1672	Gr. 2658	6·0	18 40 16·97	+ 0·5264	− ·0059	− 3	+62 40 29·2	+ 3·505	+ ·074	+ 60	8, 7	15·69, 15·70	25603
1673	Gr. 2646	7·4	18 40 43·08	+ 1·7644	+ ·0010	− 23	+44 51 0·0	+ 3·543	+ ·251	− 25	4, 4	19·79, 19·79	4741
1674	Gr. 2644	6·5	18 40 46·56	+ 1·9992	+ ·0014	+ 9	+39 13 26·7	+ 3·547	+ ·285	− 5	6, 4	19·87, 20·15	25634
1675	Pi 18h, 179	6·3	18 40 58·38	+ 2·1005	+ ·0014	+ 16	+36 28 43·4	+ 3·565	+ ·300	+ 62	5, 4	19·98, 20·32	25640
1676	c Drac	5·1	18 41 10·79	+ 1·1624	− ·0015	− 7	+55 27 47·2	+ 3·582	+ ·165	+ 22	6, 2	12·91, 13·05	4745
1677	BD + 23° 3439	6·5	18 41 32·57	+ 2·5009	+ ·0013	+ 3	+23 30 49·3	+ 3·614	+ ·357	− 90	5, 5	19·61, 19·61	25663
1678	Gr. 2659	6·1	18 41 53·14	+ 1·2777	− ·0010	+ 1	+53 47 41·1	+ 3·643	+ ·182	− 12	5, 5	13·23, 13·23	25657
1679	ζ^1 Lyra	4·4	18 42 11·32	+ 2·0638	+ ·0014	+ 22	+37 31 33·1	+ 3·669	+ ·294	+ 17	6, 6	14·26, 14·26	4752
1680	ζ^2 Lyra	6·1	18 42 13·24	+ 2·0643	+ ·0014	+ 16	+37 30 55·3	+ 3·672	+ ·295	+ 11	1, 1	15·59, 15·59	4754
1681	110 Herc S	4·3	18 42 26·042	+ 2·5824	+ ·0011	− 15*	+20 28 24·49	+ 3·690	+ ·368	−344*	12, 12	19·16, 18·39	4753
1682	6 Aqil F	4·5	18 43 11·716	+ 3·1837	− ·0011	− 7*	− 4 49 45·60	+ 3·756	+ ·454	− 23*	9, 17	19·70, 20·24	4756
1683	BD + 54° 2034	6·3	18 43 24·50	+ 1·2111	+ ·0014	+ 2	+54 49 2·7	+ 3·774	+ ·172	− 23	5, 5	12·16, 12·35	25715
1684	Br. 2370	6·4	18 43 25·24	+ 0·7082	− ·0051	− 20	+60 58 5·7	+ 3·775	+ ·100	+ 10	7, 5	13·42, 14·16	4763
1685	Gr. 2664	5·7	18 43 49·12	+ 1·9178	+ ·0012	− 6	+41 21 36·6	+ 3·809	+ ·173	− 9	5, 4	20·36, 20·32	25732
1686	Br. 2382	6·6	18 44 1·56	− 0·6759	− ·0225	− 10	+70 42 50·5	+ 3·827	− ·098	− 5	10, 8	19·01, 19·47	25707
1687	Gr. 2671	5·9	18 45 2·49	+ 1·3396	− ·0009	+ 16	+52 54 18·0	+ 3·914	+ ·190	− 16	6, 7	14·91, 14·54	4765
1688	BD + 31° 3369	5·8	18 45 7·48	+ 2·2643	+ ·0014	+ 3	+31 40 21·8	+ 3·921	+ ·322	− 6	7, 7	19·74, 19·74	25768
1689	BD + 23° 3461	6·0	18 45 8·30	+ 2·5049	+ ·0012	+ 13	+23 25 49·7	+ 3·922	+ ·356	− 33	5, 6	18·91, 19·19	25772
1690	Gr. 2677	6·2	18 46 17·42	+ 1·5837	+ ·0003	− 21	+48 40 51·0	+ 4·021	+ ·224	+ 41	5, 4	13·22, 12·14	4770
1691	BD + 67° 1096	7·0	18 46 54·89	− 0·1152	− ·0153	+ 17	+67 41 11·6	+ 4·075	− ·018	− 17	6, 6	19·27, 19·27	25793
1692	ν^2 Lyra	5·4	18 47 4·88	+ 2·2406	+ ·0014	− 19	+32 27 48·8	+ 4·089	+ ·318	− 8	5, 5	20·18, 20·18	4775
1693	β^1 Lyra S	Var.	18 47 18·631	+ 2·2145	+ ·0014	+ 3*	+33 16 28·87	+ 4·108	+ ·314	− 7*	27, 18	14·97, 15·72	4776
1694	Gr. 2687	7·0	18 48 26·97	+ 1·8169	+ ·0008	− 18	+43 52 2·4	+ 4·206	+ ·257	+ 15	5, 5	19·36, 19·36	25870
1695	BD + 13° 3787	6·0	18 48 35·66	+ 2·7501	+ ·0005	− 7	+13 52 29·5	+ 4·218	+ ·390	− 19	5, 5	18·95, 18·95	25886
1696	BD + 28° 3104	6·6	18 48 38·99	+ 2·3578	+ ·0013	+ 5	+28 41 34·6	+ 4·223	+ ·334	+ 6	5, 5	19·13, 19·13	25883
1697	50 Drac	5·5	18 48 48·18	− 1·9223	− ·0530	− 36	+75 20 47·2	+ 4·236	− ·276	+ 77	12, 13	14·09, 13·83	4788
1698	BD + 36° 3295	6·2	18 48 58·33	+ 2·1083	+ ·0013	+ 10	+36 26 53·4	+ 4·251	+ ·299	− 26	6, 5	18·76, 19·20	25889
1699	Gr. 2693	6·1	18 49 42·70	+ 1·9267	+ ·0010	− 19	+41 17 28·1	+ 4·314	+ ·272	− 4	5, 5	19·01, 19·01	25906
1700	Gr. 2699	5·7	18 49 54·16	+ 1·3490	− ·0012	− 37	+52 52 37·0	+ 4·330	+ ·190	+286	6, 2	13·78, 13·18	4787

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			h m s	s	s		° ′ ″	″	″				
1701	o Drac.....S	4·8	18 50 5·693	+ 0·8761	− ·0046	+108*	+59 17 47·47	+ 4·347	+ ·123	+ 23*	15, 12	15·83, 16·37	4790
1702	BD + 79° 604.....	6·3	50 57·20	− 4·2115	− ·1355	+ 81	+79 51 13·8	+ 4·420	− ·601	+ 75	10, 10	15·70, 15·70	25868
1703	δ^1 Lyra.....	5·7	51 6·36	+ 2·0951	+ ·0031	− 6	+36 52 37·2	+ 4·433	+ ·296	− 9	3, 3	20·29, 20·29	4794
1704	BD + 27° 3150.....	6·2	51 14·33	+ 2·3853	+ ·0013	− 16	+27 48 57·0	+ 4·444	+ ·337	− 76	6, 7	21·06, 20·99	25942
1705	Gr. 2709.....	5·1	51 22·07	+ 1·4859	− ·0004	+ 1	+50 36 52·0	+ 4·455	+ ·210	− 33	5, 3	13·82, 13·28	4799
1706	δ^2 Lyra.....	4·5	18 51 52·74	+ 2·0985	+ ·0013	− 7	+36 48 8·2	+ 4·498	+ ·296	+ 6	1, 1	17·68, 17·68	4800
1707	Gr. 2720.....	6·5	52 28·23	+ 1·0384	− ·0036	+ 19	+57 23 27·3	+ 4·549	+ ·146	− 8	5, 4	13·83, 13·64	25960
1708	θ Serp.....F	4·5	52 29·458	+ 2·9794	− ·0005	+ 31*	+ 4 6 17·56	+ 4·551	+ ·421	+ 27*	16, 32	18·94, 18·44	4802
1709	BD + 17° 3779.....	6·0	52 47·62	+ 2·6498	+ ·0008	− 44	+18 0 38·8	+ 4·577	+ ·374	−173	3, 3	19·29, 19·29	4807
1710	Pi 18h, 254.....	6·0	52 48·46	+ 1·5885	− ·0001	− 58	+48 45 55·9	+ 4·578	+ ·224	−131	4, 3	13·30, 13·87	4811
1711	λ U. Min.....P	6·8	18 52 56·375	−73·635	−19·697	−1140*	+89 1 42·33	+ 4·590	−10·454	+ 8*	25, 17	20·92, 20·65	4971
1712	R Lyra.....S	Var.	53 13·146	+ 1·8235	+ ·0007	+ 26*	+43 50 47·84	+ 4·599	+ ·257	+ 72*	12, 8	15·98, 17·69	4814
1713	ν Drac.....S	5·0	55 19·282	− 0·7382	− ·0306	+110*	+71 11 50·47	+ 4·792	− ·107	+ 40*	20, 21	19·61, 19·63	4825
1714	48 Drac.....	6·0	55 28·99	+ 1·0194	− ·0041	− 44	+57 42 55·6	+ 4·806	+ ·143	− 65	2, 2	12·64, 12·64	4822
1715	BD + 19° 3858.....	6·2	55 29·40	+ 2·6085	− ·0008	− 1	+19 41 29·3	+ 5·806	+ ·367	− 8	7, 7	18·32, 18·32	26067
1716	BD + 65° 1309.....	5·9	18 56 5·75	+ 0·2725	− ·0128	− 7	+65 9 26·9	+ 4·858	+ ·037	− 40	4, 4	18·85, 18·85	4829
1717	γ Lyra.....S	3·2	56 8·258	+ 2·2442	+ ·0013	− 2*	+32 35 8·62	+ 4·861	+ ·315	− 7*	10, 10	17·40, 17·40	4824
1718	ε Aqil.....F	4·2	56 13·109	+ 2·7263	+ ·0004	− 44*	+14 57 55·42	+ 4·868	+ ·384	− 77*	12, 36	16·25, 16·00	4823
1719	Pi 18h, 287.....	6·7	56 14·37	+ 0·9884	− ·0045	+ 34	+58 7 17·6	+ 4·870	+ ·139	+ 46	2, 2	20·60, 20·60	4827
1720	Gr. 2727.....	6·1	56 19·28	+ 1·9628	+ ·0010	+ 2	+40 34 31·5	+ 4·877	+ ·275	− 3	5, 5	19·45, 19·45	26087
1721	BD + 22° 3549.....	6·0	18 56 48·34	+ 2·5306	+ ·0010	− 20	+22 42 32·6	+ 4·918	+ ·378	+ 9	6, 6	21·11, 21·11	26107
1722	BD + 50° 2705.....	6·8	57 7·59	+ 1·4904	− ·0009	+ 21	+50 42 15·4	+ 4·945	+ ·208	+ 14	5, 5	19·25, 19·25	26103
1723	BD + 33° 3285.....	6·9	57 38·40	+ 2·2117	+ ·0013	+ 7	+33 38 8·2	+ 4·988	+ ·311	− 8	6, 4	20·95, 21·09	26125
1724	BD + 33° 3287.....	6·8	58 9·31	+ 2·2103	+ ·0013	+ 2	+33 41 41·6	+ 5·032	+ ·310	− 1	1, 2	20·59, 20·57	26142
1725	Gr. 2740.....	6·8	58 27·48	+ 1·9024	+ ·0008	− 17	+42 8 53·7	+ 5·058	+ ·266	−138	6, 6	20·95, 20·95	26150
1726	49 Drac.....	5·7	18 59 14·45	+ 1·1895	− ·0030	− 19	+55 33 1·9	+ 5·123	+ ·165	− 9	1, 1	11·71, 11·71	4848
1727	16 Lyra.....	5·2	59 18·99	+ 1·6958	+ ·0001	+ 19	+46 49 40·5	+ 5·131	+ ·238	− 89	1, 1	15·57, 15·57	4846
1728	BD + 69° 1018.....	6·4	59 20·90	− 0·3683	− ·0251	+ 36	+69 25 28·2	+ 5·133	− ·054	− 42	6, 5	16·91, 15·98	26146
1729	BD + 19° 3888.....	6·4	59 36·46	+ 2·6142	+ ·0007	− 3	+19 33 2·9	+ 5·155	+ ·366	− 8	5, 5	19·62, 19·59	26198
1730	Gr. 2753.....	6·7	19 0 21·19	+ 1·4123	− ·0014	− 19	+52 9 5·7	+ 5·218	+ ·196	− 24	3, 3	17·56, 17·56	4855
1731	17 Aqil.....	3·0	19 1 57·8	+ 2·7577	+ ·0002	− 6	+13 45 3·3	+ 5·354	+ ·385	−102	0, 3	12·26	4858
1732	Pi 18h, 309.....	6·5	2 4·73	+ 2·3107	+ ·0012	+ 19	+30 37 10·9	+ 5·363	+ ·322	− 25	5, 5	19·62, 19·62	26264
1733	λ Aqil.....F	3·4	2 16·130	+ 3·1853	− ·0023	− 17*	− 4 59 45·93	+ 5·379	+ ·445	− 90*	3, 3	17·57, 16·26	4859
1734	BD + 29° 3472.....	6·6	2 51·86	+ 2·3359	+ ·0012	− 8	+29 48 22·1	+ 5·430	+ ·325	− 12	5, 5	20·24, 20·24	26293
1735	BD + 68° 1040.....	6·9	2 54·26	− 0·1450	− ·0223	+ 35	+68 12 43·9	+ 5·433	+ ·023	+ 4	5, 5	21·04, 21·04	26260
1736	51 Drac.....	5·5	19 3 14·06	+ 1·3490	− ·0022	− 6	+53 16 51·3	+ 5·461	+ ·187	+ 21	2, 2	13·64, 13·64	4869
1737	Br. 2409.....	5·9	3 30·74	+ 2·4969	+ ·0010	+ 41	+24 8 0·4	+ 5·484	+ ·347	+ 3	3, 3	20·96, 20·96	4866
1738	Gr. 2765.....	6·6	3 51·13	+ 1·9442	+ ·0009	+ 10	+41 17 48·5	+ 5·513	+ ·271	− 11	3, 4	18·97, 19·61	4870
1739	17 Lyra.....	5·3	4 35·28	+ 2·2588	+ ·0012	+ 95	+32 22 57·1	+ 5·575	+ ·314	+ 13	2, 2	20·62, 20·62	4872
1740	BD + 16° 3752.....	5·9	4 38·41	+ 2·6867	+ ·0004	+ 37	+16 44 27·7	+ 5·575	+ ·374	−310	5, 5	20·43, 20·43	26347
1741	ι Lyra.....	5·3	19 4 37·49	+ 2·1409	+ ·0012	− 6	+35 58 54·2	+ 5·578	+ ·297	− 6	5, 4	11·79, 11·84	4873
1742	Pi 18h, 318.....	5·7	4 39·06	+ 2·3748	+ ·0012	+ 54	+28 30 34·6	+ 5·496	+ ·330	+ 68	1, 1	15·51, 15·51	4867
1743	BD + 21° 3672.....	6·2	4 50·80	+ 2·5653	+ ·0008	+ 33	+21 34 40·7	+ 5·596	+ ·357	+ 71	5, 5	17·97, 17·97	26355
1744	BD + 34° 3437.....	6·6	6 1·01	+ 2·1876	+ ·0012	+ 1	+34 38 21·5	+ 5·694	+ ·303	− 8	5, 5	19·05, 19·05	26392
1745	Gr. 2777.....	7·1	6 38·36	+ 1·5340	− ·0010	+ 3	+50 14 32·1	+ 5·747	+ ·212	+ 4	4, 4	20·59, 20·59	4878
1746	Gr. 2778.....	5·0	19 6 40·54	+ 1·4161	− ·0019	−113	+52 18 20·6	+ 5·750	+ ·195	− 62	6, 7	12·79, 12·62	26397
1747	BD + 31° 3485.....	8·0	7 54·37	+ 2·2990	+ ·0012	0	+31 11 50·6	+ 5·853	+ ·318	0	1, 1	12·46, 12·46	
1748	19 Lyra.....	6·0	8 53·40	+ 2·3011	+ ·0012	− 10	+31 9 26·1	+ 5·935	+ ·318	− 3	2, 3	12·60, 12·90	26459
1749	Gr. 2782.....	5·8	8 53·76	+ 1·9902	+ ·0009	− 5	+40 18 14·5	+ 5·935	+ ·275	− 25	5, 5	13·96, 13·96	26454
1750	B.A.C. 6574.....	5·9	9 23·68	+ 2·5722	+ ·0007	0	+21 25 37·9	+ 5·977	+ ·355	− 5	8, 7	20·10, 19·89	26470

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			h m s	s	s		° ′ ″	″	″				
1751	55 Drac	6·5	19 9 29·15	+ 0·2279	− ·0176	+ 2	+65 51 10·4	+ 5·985	+ ·029	+ 29	5, 5	14·17, 14·17	4890
1752	Gr. 2787	6·5	10 8·57	+ 1·6945	− ·0003	0	+47 14 50·0	+ 6·040	+ ·233	− 4	5, 5	19·35, 19·35	26480
1753	Gr. 2789	7·1	10 8·64	+ 1·5697	− ·0009	−180	+49 42 41·4	+ 6·039	+ ·215	+606	3, 2	13·60, 13·60	4892
1754	BD + 49° 2959	6·8	10 9·0	+ 1·5696	− ·0010	−198	+49 42 47·9	+ 6·040	+ ·216	+625	0, 2	13·59	4893
1755	53 Drac	5·4	10 15·43	+ 1·1310	− ·0047	+ 47	+56 43 50·8	+ 6·049	+ ·155	+ 40	4, 4	12·57, 12·57	4894
1756	BD + 19° 3956	6·8	19 11 47·01	+ 2·6082	+ ·0006	− 12	+20 4 16·1	+ 6·167	+ ·359	− 3	5, 5	20·72, 20·70	26530
1757	59 Drac	5·2	11 55·87	− 2·1952	− ·0926	+136	+76 26 12·7	+ 6·189	− ·308	−126	9, 10	14·68, 14·73	4911
1758	1 Sgte	5·8	12 3·39	+ 2·5824	+ ·0007	+ 30	+21 6 0·3	+ 6·199	+ ·355	+ 11	3, 4	19·97, 19·88	4899
1759	BD + 30° 3491	6·2	12 29·98	+ 2·3278	+ ·0012	+ 18	+30 23 40·3	+ 6·236	+ ·320	− 26	5, 5	20·73, 20·73	26550
1760	δ Drac S	3·1	12 32·486	+ 0·0024	− ·0231	+173*	+67 31 47·34	+ 6·239	− ·002	+ 89*	10, 10	17·39, 17·40	4909
1761	54 Drac	5·3	19 12 34·89	+ 1·0737	− ·0057	− 16	+57 34 32·1	+ 6·242	+ ·146	− 75	6, 5	14·10, 14·19	4907
1762	BD + 27° 3314	6·2	12 59·12	+ 2·4039	− ·0183	− 3	+27 47 34·6	+ 6·276	+ ·330	+ 21	5, 5	19·16, 19·16	26562
1763	θ Lyra S	4·5	13 45·839	+ 2·0824	+ ·0010	− 9*	+37 59 58·46	+ 6·341	+ ·285	− 3*	10, 11	18·14, 18·35	4912
1764	ω Aqil F	5·3	14 17·765	+ 2·8160	− ·0003	− 1*	+11 27 32·76	+ 6·385	+ ·386	+ 11*	9, 18	17·23, 16·40	4914
1765	Gr. 2809	6·2	14 42·28	+ 1·7220	− ·0002	− 8	+46 51 23·3	+ 6·419	+ ·235	+285	5, 5	13·97, 13·97	4920
1766	κ Cygn S	3·9	19 15 22·186	+ 1·3804	− ·0027	+ 71*	+53 13 46·39	+ 6·474	+ ·188	+117*	15, 8	15·76, 16·62	4923
1767	BD + 37° 3413	6·1	16 22·72	+ 2·1106	+ ·0010	+ 8	+37 18 21·7	+ 6·557	+ ·288	+ 15	5, 5	19·12, 19·12	26650
1768	Gr. 2812	7·1	16 27·64	+ 2·0050	+ ·0008	− 3	+40 13 16·6	+ 6·564	+ ·273	+ 9	2, 3	16·10, 14·62	4930
1769	Gr. 2815	6·5	16 37·82	+ 1·5985	− ·0011	+ 6	+49 25 46·8	+ 6·578	+ ·217	+ 50	3, 4	15·61, 14·62	26652
1770	τ Drac S	4·7	17 0·290	− 1·1102	− ·0566	−321*	+73 13 0·70	+ 6·609	− ·156	+109*	23, 20	17·61, 17·71	4940
1771	BD + 37° 3417	6·4	19 17 0·69	+ 2·1153	+ ·0010	− 60	+37 11 40·8	+ 6·610	+ ·288	−189	5, 6	19·01, 19·10	26670
1772	BD + 34° 3503	6·1	17 48·73	+ 2·1890	+ ·0011	+ 5	+35 2 40·5	+ 6·676	+ ·298	+ 8	7, 7	19·62, 19·62	26690
1773	Gr. 2818	6·5	17 55·17	+ 2·0237	+ ·0009	+ 9	+39 47 5·7	+ 6·684	+ ·275	− 14	5, 6	19·18, 19·42	26692
1774	Gr. 2822	6·6	17 57·08	+ 1·3237	− ·0034	+ 28	+54 14 9·5	+ 6·687	+ ·180	− 28	3, 3	12·90, 12·90	4939
1775	Gr. 2827	6·0	18 53·583	+ 1·0980	− ·0059	+ 25	+57 30 10·5	+ 6·765	+ ·148	+ 9	6, 6	12·62, 12·62	26708
1776	Gr. 2835	6·3	19 19 11·57	+ 0·4661	− ·0158	− 6	+64 14 55·6	+ 6·789	+ ·061	+ 10	4, 4	14·13, 14·13	26709
1777	BD + 33° 3434	6·3	19 44·83	+ 2·2453	+ ·0011	+ 2	+33 22 27·0	+ 6·835	+ ·305	− 36	7, 7	16·00, 15·59	26743
1778	Gr. 2829	6·8	19 47·11	+ 1·4515	− ·0023	+ 1	+52 13 54·3	+ 6·838	+ ·196	+ 26	5, 5	19·35, 19·33	26732
1779	BD + 19° 3997	7·1	19 56·24	+ 2·6120	+ ·0005	− 11	+20 7 48·7	+ 6·851	+ ·355	+ 92	3, 3	20·27, 20·27	26756
1780	π Drac	4·6	20 17·23	+ 0·3097	− ·0192	+ 31	+65 34 10·9	+ 6·879	+ ·039	+ 41	2, 2	14·64, 14·64	4948
1781	BD + 19° 4000	6·4	19 20 30·87	+ 2·6132	+ ·0005	− 9	+20 7 4·0	+ 6·898	+ ·355	+ 5	4, 4	19·30, 19·30	26770
1782	2 Sgte	6·2	20 59·97	+ 2·6945	+ ·0002	− 7	+16 47 26·1	+ 6·937	+ ·365	− 16	4, 4	20·56, 20·56	4947
1783	b Aqil	5·4	21 23·08	+ 2·8114	− ·0005	+493	+11 46 57·4	+ 6·970	+ ·382	+632	1, 1	12·62, 12·62	4950
1784	Pi 19h, 116	7·3	21 27·51	+ 2·6220	+ ·0005	+ 30	+19 47 28·0	+ 6·975	+ ·355	+ 24	5, 5	20·02, 20·02	26807
1785	Gr. 2832	6·1	21 34·15	+ 1·8949	+ ·0005	+ 22	+43 14 28·9	+ 6·985	+ ·257	− 39	2, 3	14·13, 13·30	4958
1786	δ Aqil F	3·4	19 21 43·021	+ 3·0080	− ·0018	+169*	+ 2 57 50·73	+ 6·997	+ ·408	+ 77*	26, 71	17·67, 16·93	4953
1787	Br. 2457	6·6	22 6·38	+ 2·6143	+ ·0005	− 9	+20 7 22·6	+ 7·028	+ ·354	− 30	5, 5	19·38, 19·38	26819
1788	4 Vulp	5·4	22 11·17	+ 2·6260	+ ·0004	+ 54	+19 39 2·3	+ 7·035	+ ·355	− 73	2, 2	19·04, 19·04	4960
1789	Pi 19h, 140	7·4	22 34·80	+ 1·5776	− ·0014	− 10	+50 5 33·7	+ 7·067	+ ·212	− 13	2, 2	20·53, 20·53	4966
1790	5 Vulp	5·8	22 56·73	+ 2·6192	+ ·0005	− 5	+19 56 52·2	+ 7·097	+ ·353	− 39	4, 4	20·07, 20·07	4965
1791	4 Cygn	5·2	19 23 27·01	+ 2·1600	+ ·0011	+ 5	+36 10 0·4	+ 7·138	+ ·291	+ 6	2, 2	16·60, 16·60	4972
1792	B.A.C. 6702	6·2	24 15·11	− 2·0865	− ·1050	− 29	+76 24 42·8	+ 7·204	− ·287	+ 2	11, 10	19·63, 19·54	26826
1793	Pi 19h, 156	6·9	24 25·36	+ 1·0874	− ·0066	− 16	+57 52 32·7	+ 7·218	+ ·145	− 3	2, 2	18·59, 18·59	4975
1794	BD + 62° 1716	6·1	25 34·19	+ 0·6925	− ·0130	+ 23	+62 24 11·3	+ 7·312	+ ·091	+ 50	5, 5	12·74, 12·74	26888
1795	α Vulp S	4·6	25 35·067	+ 2·5055	+ ·0008	− 93*	+24 30 43·47	+ 7·313	+ ·337	−113*	29, 17	16·15, 15·73	4976
1796	7 Cygn	5·9	19 25 35·79	+ 1·4707	− ·0024	− 27	+52 10 1·0	+ 7·313	+ ·196	− 32	5, 5	13·09, 13·09	4980
1797	8 Vulp	6·1	25 49·25	+ 2·5032	+ ·0008	− 8	+24 36 47·4	+ 7·332	+ ·336	− 5	7, 7	15·57, 15·57	4978
1798	7 Vulp	6·8	26 4·52	+ 2·6173	+ ·0005	− 9	+20 7 26·9	+ 7·352	+ ·351	− 19	4, 4	20·30, 20·30	4981
1799	Gr. 2900	6·3	26 15·45	− 3·6026	− ·1970	+ 93	+79 27 14·3	+ 7·368	− ·492	− 37	12, 14	14·45, 14·27	4990
1800	36 Aqil	5·3	26 44·54	+ 3·1367	− ·0032	+ 6	− 2 56 47·6	+ 7·407	+ ·422	− 13	1, 1	12·64, 12·64	4983

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			h m s	s	s		° ′ ″	″	″				
1801	β^1 Cygn.....S	3·0	19 27 41·772	+ 2·4192	+ ·0010	− 2*	+27 48 4·30	+ 7·484	+ ·324	− 9*	13, 13	17·18, 17·18	4986
1802	ι Cygn.....S	3·9	19 27 48·904	+ 1·5108	− ·0022	+ 21*	+51 34 10·21	+ 7·494	+ ·201	+124*	13, 8	15·92, 16·98	4988
1803	Pi 19h, 164.....	5·8	19 28 3·95	+ 2·1704	+ ·0011	+ 1	+36 4 11·9	+ 7·514	+ ·290	− 14	6, 5	19·27, 19·39	26960
1804	BD + 26° 3573.....	6·5	19 28 17·24	+ 2·4565	+ ·0009	+ 21	+26 27 25·4	+ 7·532	+ ·329	+ 26	5, 5	18·94, 18·94	26968
1805	Gr. 2864.....	6·7	19 28 35·61	+ 1·2879	− ·0046	+ 26	+55 15 39·0	+ 7·557	+ ·171	+144	7, 7	19·90, 19·90	26961
1806	8 Cygn.....	4·8	19 29 59·01	+ 2·2293	+ ·0011	− 2	+34 17 33·7	+ 7·589	+ ·298	− 3	2, 2	12·63, 12·63	4992
1807	Gr. 2865.....	5·7	19 29 20·25	+ 1·5921	− ·0015	− 30	+50 8 43·1	+ 7·617	+ ·211	+ 38	3, 4	12·50, 12·07	4994
1808	BD + 70° 1073.....	6·3	19 31 36·76	− 0·4673	− ·0449	− 20	+70 49 36·0	+ 7·801	− ·066	+ 57	10, 13	19·48, 19·12	27023
1809	Gr. 2876.....	6·1	19 31 37·66	+ 1·6518	− ·0012	− 1	+49 5 54·1	+ 7·802	+ ·218	− 6	4, 4	13·83, 13·83	27045
1810	9 Cygn.....	5·6	19 31 52·06	+ 2·3824	+ ·0010	+ 13	+29 17 49·8	+ 7·821	+ ·317	+ 18	5, 4	19·42, 19·38	5000
1811	BD + 59° 2060.....	6·5	19 31 59·54	+ 0·9421	− ·0097	+ 12	+59 59 39·3	+ 7·831	+ ·123	− 3	6, 6	13·28, 13·28	27048
1812	Pi 19h, 211.....	5·9	19 32 23·28	+ 1·5508	− ·0020	+ 32	+51 4 31·8	+ 7·863	+ ·205	−203	2, 2	20·06, 20·06	5005
1813	σ Drac.....	4·8	19 32 29·23	− 0·2200	− ·0368	+1080	+69 32 21·9	+ 7·876	− ·033	−1750	5, 6	13·64, 13·33	5009
1814	BD + 46° 2727.....	7·0	19 32 31·41	+ 1·7868	− ·0003	+ 15	+46 18 3·8	+ 7·874	+ ·236	+ 25	5, 6	20·37, 20·39	27080
1815	Gr. 2880.....	6·5	19 32 31·88	+ 1·7080	− ·0008	− 21	+48 00 2·2	+ 7·875	+ ·226	− 75	5, 6	19·62, 19·79	27078
1816	κ Aqil.....F	5·1	19 32 51·436	+ 3·2279	− ·0045	0*	− 7 11 43·21	+ 7·901	+ ·429	− 7*	15, 31	19·49, 18·42	27107
1817	11 Cygn.....	6·2	19 33 6·59	+ 2·1552	+ ·0011	+ 1	+36 46 38·6	+ 7·922	+ ·286	− 6	2, 3	20·64, 20·64	5007
1818	Gr. 2877.....	5·5	19 33 14·45	+ 1·9561	+ ·0006	− 1	+42 14 51·8	+ 7·852	+ ·269	− 21	3, 3	17·57, 17·57	5002
1819	Br. 2496.....	6·8	19 33 55·35	+ 1·6085	− ·0017	− 7	+50 4 11·6	+ 7·987	+ ·212	+ 32	3, 2	15·65, 15·16	5011
1820	Gr. 2893.....	5·4	19 34 18·61	+ 1·8680	+ ·0002	− 86	+44 31 42·4	+ 8·018	+ ·241	−111	4, 4	14·10, 14·10	5012
1821	BD + 56° 2272.....	6·5	19 34 25·69	+ 1·2001	− ·0061	− 5	+56 49 11·9	+ 8·027	+ ·157	−209	5, 5	20·73, 20·73	27130
1822	θ Cygn.....S	4·5	19 34 25·796	+ 1·6111	− ·0016	− 30*	+50 2 48·42	+ 8·027	+ ·212	+247*	20, 15	15·78, 15·82	5014
1823	BD + 34° 3637.....	6·5	19 34 54·21	+ 2·2209	+ ·0012	0	+34 51 9·2	+ 8·065	+ ·293	+ 2	6, 5	19·25, 19·19	27162
1824	BD + 33° 3547.....	6·5	19 36 55·57	+ 2·2569	+ ·0012	+ 2	+33 48 17·9	+ 8·227	+ ·296	+ 14	7, 7	20·19, 20·19	27216
1825	14 Cygn.....	5·4	19 36 59·96	+ 1·9507	+ ·0005	+ 19	+42 38 38·4	+ 8·233	+ ·256	+ 24	13, 10	14·50, 14·56	5024
1826	Gr. 2907.....	6·0	19 37 0·01	+ 1·3458	− ·0044	+ 51	+54 47 49·3	+ 8·233	+ ·175	+170	4, 4	14·38, 13·88	5026
1827	BD + 45° 2940.....	6·5	19 37 17·83	+ 1·8214	− ·0002	− 10	+45 46 59·3	+ 8·256	+ ·238	+ 44	6, 6	12·28, 12·28	27220
1828	β Sgte.....	4·5	19 37 40·83	+ 2·6938	+ ·0000	+ 1	+17 18 4·9	+ 8·287	+ ·354	− 38	2, 2	12·20, 12·20	5027
1829	BD + 22° 3767.....	6·6	19 38 1·49	+ 2·5747	+ ·0006	+ 14	+22 16 37·4	+ 8·314	+ ·338	− 6	5, 6	20·52, 20·36	27242
1830	BD + 42° 3419.....	6·6	19 38 15·29	+ 1·9434	+ ·0005	+ 6	+42 54 8·0	+ 8·333	+ ·254	− 7	6, 6	17·76, 17·76	27240
1831	Gr. 2909.....	5·2	19 38 31·21	+ 1·8433	+ ·0000	+ 91	+45 20 46·6	+ 8·354	+ ·241	+105	8, 8	13·78, 13·78	5031
1832	Gr. 2912.....	6·4	19 39 23·70	+ 2·0526	+ ·0008	− 25	+40 4 32·9	+ 8·423	+ ·268	+ 11	2, 2	18·10, 18·10	5035
1833	c^1 Cygn.....	6·2	19 39 49·42	+ 1·6109	− ·0017	−162	+50 21 3·2	+ 8·457	+ ·210	−152	6, 8	17·51, 17·18	5037
1834	BD + 32° 3531.....	5·8	19 39 51·40	+ 2·3085	+ ·0012	− 9	+32 14 53·1	+ 8·460	+ ·301	− 9	6, 6	19·40, 19·40	27292
1835	c^2 Cygn.....	6·3	19 39 52·26	+ 1·6114	− ·0018	−138	+50 20 35·9	+ 8·461	+ ·210	−156	2, 2	20,68· 20·68	5038
1836	BD + 30° 3706.....	6·2	19 40 12·55	+ 2·3598	+ ·0012	− 13	+30 29 54·7	+ 8·488	+ ·308	+ 36	6, 6	19·59, 19·59	27297
1837	Gr. 2919.....	6·5	19 40 23·31	+ 2·0377	+ ·0008	+ 11	+40 32 33·2	+ 8·502	+ ·265	− 8	4, 4	19·14, 19·14	27298
1838	BD + 55° 2245.....	6·7	19 40 24·69	+ 1·3261	− ·0049	+ 11	+55 17 8·6	+ 8·504	+ ·171	− 42	5, 5	14·21, 14·21	27294
1839	Gr. 2920.....	6·7	19 40 32·30	+ 2·1107	+ ·0011	+ 1	+38 29 31·6	+ 8·514	+ ·275	+ 8	5, 6	19·44, 19·64	27302
1840	Br. 2510.....	7·0	19 40 51·49	+ 2·4580	+ ·0616	− 11	+26 57 17·8	+ 8·539	+ ·320	+ 3	5, 5	20·63, 20·63	27308
1841	BD 33° 3572.....	6·7	19 41 2·01	+ 2·2582	+ ·0012	− 5	+33 58 55·6	+ 8·553	+ ·294	+ 0	5, 5	19·60, 19·60	27310
1842	15 Cygn.....	5·1	19 41 34·19	+ 2·1574	+ ·0011	+ 57	+37 10 20·2	+ 8·596	+ ·280	+ 34	8, 9	13·37, 13·18	5045
1843	Gr 2935.....	6·6	19 41 46·74	+ 1·1538	− ·0074	+167	+57 50 14·8	+ 8·612	+ ·148	− 62	5, 5	15·85, 15·85	27322
1844	BD + 34° 3691.....	7·0	19 41 49·15	+ 2·2518	+ ·0012	+ 0	+34 13 56·1	+ 8·615	+ ·293	− 12	5, 6	19·00, 19·42	27335
1845	Pi 19h, 284.....	6·6	19 42 7·66	+ 1·2258	− ·0064	+ 8	+56 51 39·5	+ 8·640	+ ·158	+ 19	6, 5	16·48, 17·43	27333
1846	Gr. 2928.....	6·5	19 42 16·31	+ 2·0419	+ ·0009	− 61	+40 32 6·3	+ 8·651	+ ·265	− 24	5, 4	20·20, 20·09	27341
1847	δ Cygn.....F	2·8	19 42 37·786	+ 1·8705	+ ·0001	+ 50*	+44 56 49·17	+ 8·679	+ ·242	+ 37*	10, 10	19·72, 19·72	5048
1848	γ Aqil.....F	2·8	19 42 41·635	+ 2·8511	− ·0011	+ 9*	+10 25 46·14	+ 8·684	+ ·371	− 4*	20, 39	17·17, 16·59	5047
1849	Pi 19h, 278.....	6·4	19 43 3·55	+ 2·2355	+ ·0012	+ 0	+34 49 44·6	+ 8·712	+ ·289	− 12	3, 3	20·90, 20·90	5049
1850	BD + 32° 3558.....	6·5	19 43 42·59	+ 2·3011	+ ·0013	− 30	+32 42 13·8	+ 8·764	+ ·298	− 5	5, 5	20·78, 20·78	27372

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			h m s	s	s		° ′ ″	″	″				
1851	δ Sgte.....F	3·8	19 44 2·587	+ 2·6745	+ ·0001	+ 1*	+18 20 54·18	+ 8·790	+ ·347	+ 9*	16, 30	17·43, 17·20	5052
1852	Gr. 2952.....	6·0	19 44 25·22	− 0·0786	− ·0381	+ 26	+69 9 14·5	+ 8·820	− ·013	− 24	3, 4	12·71, 12·45	5057
1853	BD + 25° 3972.....	6·2	19 44 39·96	+ 2·5085	+ ·0009	+ 56	+25 11 52·5	+ 8·839	+ ·324	− 27	5, 5	19·16, 19·16	27402
1854	Gr. 2941.....	6·2	19 45 15·34	+ 1·7554	− ·0007	− 31	+47 43 17·7	+ 8·886	+ ·226	− 34	5, 5	15·82, 15·82	27407
1855	BD + 68° 1082.....	6·4	19 46 39·59	+ 0·0794	− ·0339	+ 5	+68 15 2·4	+ 8·996	+ ·006	+ 13	5, 5	19·20, 19·20	27430
1856	Br. 2529.....	6·4	19 46 48·25	+ 2·1225	+ ·0012	+ 2	+38 31 15·2	+ 9·007	+ ·272	− 16	1, 2	12·62, 13·64	5063
1857	α Aqil.....F	0·9	19 47 7·462	+ 2·8909	− ·0015	+361*	+ 8 40 9·40	+ 9·032	+ ·372	+381*	30, 57	17·96, 17·48	5062
1858	12 Vulp.....	5·0	19 47 50·35	+ 2·5815	+ ·0006	+ 16	+22 25 6·9	+ 9·087	+ ·332	− 19	3, 3	19·60, 19·60	5068
1859	19 Cygn.....	5·5	19 47 54·46	+ 2·1246	+ ·0012	+ 9	+38 31 42·6	+ 9·093	+ ·272	+ 97	3, 3	14·34, 14·34	5069
1860	Gr. 2950.....	5·8	19 48 2·81	+ 2·0593	+ ·0010	+ 8	+40 24 29·3	+ 9·104	+ ·264	− 22	4, 4	13·70, 13·70	5070
1861	BD + 37° 3636.....	6·3	10 48 5·14	+ 2·1549	+ ·0012	+ 16	+37 38 3·6	+ 9·107	+ ·276	+ 5	5, 5	19·47, 19·47	27498
1862	ε Drac.....F	3·9	19 48 26·094	− 0·2091	− ·0047	+158*	+70 4 37·53	+ 9·134	− ·031	+ 31*	20, 23	20·42, 19·95	5079
1863	η Aqil.....	Var.	19 48 39·2	+ 3·0559	− ·0032	+ 5	+ 0 48 42·6	+ 9·151	+ ·392	− 9	0, 2	12·66	5071
1864	d Cygn.....	5·2	19 48 44·85	+ 1·5069	− ·0030	− 19	+52 47 50·3	+ 9·158	+ ·192	− 70	8, 10	19·29, 18·53	5075
1865	Gr. 2957.....	6·7	19 49 4·91	+ 1·7909	− ·0004	+ 13	+47 11 1·1	+ 9·184	+ ·228	+ 17	6, 5	16·14, 16·04	27513
1866	Gr. 2968.....	6·6	19 49 12·74	+ 0·9292	− ·0123	− 40	+61 0 56·8	+ 9·194	+ ·116	+ 50	5, 3	19·47, 19·83	27508
1867	BD + 36° 3744.....	6·1	19 49 31·02	+ 2·2031	+ ·0013	− 3	+36 14 17·0	+ 9·218	+ ·281	− 2	5, 5	19·20, 19·20	27528
1868	BD + 46° 2793.....	5·8	19 49 43·46	+ 1·8083	− ·0003	+ 6	+46 49 59·8	+ 9·235	+ ·230	− 14	5, 5	14·24, 14·24	5083
1869	BD + 24° 3914.....	5·8	19 49 52·25	+ 2·5237	+ ·0008	− 11	+24 47 55·3	+ 9·168	+ ·324	+ 19	2, 3	20·52, 20·51	5072
1870	Gr. 2962.....	6·0	19 49 54·62	+ 1·7681	− ·0006	− 16	+47 44 15·1	+ 9·248	+ ·225	− 2	2, 2	15·12, 15·12	5085
1871	Gr. 2967.....	7·1	19 50 48·06	+ 1·7766	− ·0006	− 14	+47 36 43·3	+ 9·318	+ ·225	− 12	5, 7	19·96, 20·26	27549
1872	β Aqil.....F	3·8	19 51 37·753	+ 2·9441	− ·0021	+ 24*	+ 6 13 6·23	+ 9·382	+ ·375	−483*	29, 58	17·69, 17·15	5093
1873	23 Cygn.....	5·1	19 51 45·09	+ 1·2320	− ·0071	+ 8	+57 19 35·0	+ 9·391	+ ·155	+ 10	3, 3	14·26, 14·26	5097
1874	BD + 36° 3766.....	6·0	19 52 3·81	+ 2·1903	+ ·0013	+ 1	+36 47 49·8	+ 9·415	+ ·277	+ 8	2, 2	20·12, 20·12	5096
1875	B.A.C. 6852.....	6·0	19 52 14·94	+ 1·0701	− ·0099	+ 54	+59 30 35·7	+ 9·430	+ ·134	+ 60	4, 4	18·08, 18·08	27581
1876	22 Cygn.....	5·1	19 53 10·88	+ 2·1440	+ ·0013	− 5	+38 17 11·8	+ 9·502	+ ·271	− 10	6, 4	14·35, 14·16	5102
1877	ψ Cygn.....	5·0	19 53 41·50	+ 1·5556	− ·0027	− 44	+52 14 21·3	+ 9·541	+ ·195	− 31	3, 5	15·27, 13·83	5105
1878	Gr. 2991.....	6·6	19 53 52·89	+ 1·1890	− ·0080	+ 21	+58 3 6·0	+ 9·555	+ ·148	− 72	6, 6	19·78, 19·78	27620
1879	BD + 35° 3878.....	6·0	19 53 57·69	+ 2·2179	+ ·0014	− 1	+36 2 57·2	+ 9·562	+ ·280	+ 3	5, 4	18·26, 18·40	27632
1880	Pi 19h, 371.....	5·2	19 54 29·65	+ 1·1477	− ·0087	− 9	+58 38 42·9	+ 9·602	+ ·143	− 24	3, 3	13·64, 13·64	5116
1881	Gr. 2984.....	5·6	19 54 37·52	+ 2·0831	+ ·0011	+ 21	+40 9 55·4	+ 9·613	+ ·263	− 1	4, 4	18·14, 18·14	5113
1882	Pi 19h, 370.....	6·1	19 54 41·24	+ 1·3024	− ·0062	+ 22	+56 29 6·1	+ 9·617	+ ·162	+ 15	5, 5	13·20, 13·20	27641
1883	Gr. 2990.....	6·7	19 54 42·07	+ 1·6404	− ·0018	+ 5	+50 42 1·0	+ 9·618	+ ·205	+ 0	3, 4	17·90, 18·82	5117
1884	BD + 37° 3698.....	7·8	19 55 9·58	+ 2·1605	+ ·0013	+ 8	+37 55 6·0	+ 9·653	+ ·271	− 5	1, 1	21·49, 21·49	Gr.² 8236
1885	γ Sgte.....F	3·7	19 55 25·282	+ 2·6632	+ ·0002	+ 42*	+19 17 14·92	+ 9·674	+ ·336	+ 16*	21, 48	19·45, 17·98	5118
1886	BD + 37° 3703.....	7·1	19 55 52·10	+ 2·1626	+ ·0013	+ 4	+37 54 5·4	+ 9·695	+ ·272	− 6	4, 4	19·06, 19·06	27679
1887	Gr. 3001.....	6·0	19 56 59·1	+ 1·8835	+ ·0002	+ 35	+45 34 1·4	+ 9·793	+ ·235	− 22	0, 5	17·18	5126
1888	25 Cygn.....	5·4	19 57 10·07	+ 2·1998	+ ·0014	+ 1	+36 50 10·4	+ 9·807	+ ·275	+ 11	4, 5	17·86, 18·40	5127
1889	Gr. 3004.....	6·2	19 57 16·13	+ 1·5895	− ·0024	+ 22	+51 50 58·9	+ 9·815	+ ·199	+ 3	2, 3	14·54, 13·58	5130
1890	Gr. 3019.....	6·5	19 57 32·65	+ 0·7548	− ·0176	− 11	+63 19 45·7	+ 9·836	+ ·092	− 25	4, 4	12·33, 12·33	27716
1891	15 Vulp.....	4·9	19 58 0·65	+ 2·4662	+ ·0012	+ 39	+27 32 43·7	+ 9·871	+ ·309	+ 6	1, 1	12·67, 12·70	5132
1892	Pi 19h, 379.....	6·0	19 58 29·87	+ 2·2010	+ ·0014	+ 33	+36 53 21·2	+ 9·908	+ ·275	+ 49	4, 4	18·41, 18·41	27760
1893	16 Vulp.....	5·5	19 58 50·51	+ 2·5383	+ ·0009	+ 59	+24 43 36·3	+ 9·934	+ ·316	+ 59	4, 4	19·14, 19·14	5134
1894	BD + 69° 1084.....	6·5	19 58 53·30	− 0·1433	− ·0472	+ 84	+70 9 31·5	+ 9·938	− ·023	+ 62	15, 15	18·97, 18·16	27748
1895	e Cygn.....	5·3	19 59 14·25	+ 1·6961	− ·0013	+ 19	+49 53 43·2	+ 9·965	+ ·210	− 2	4, 5	12·42, 12·27	5137
1896	BD + 29° 3872.....	5·9	20 0 31·95	+ 2·4138	+ ·0014	−516	+29 41 48·2	+10·063	+ ·300	−526	5, 5	16·99, 16·99	5144
1897	65 Drac.....	6·7	20 1 30·39	+ 0·6642	− ·0206	+ 71	+64 25 20·6	+10·136	+ ·079	+ 10	11, 10	14·71, 14·74	5152
1898	BD + 31° 3925.....	5·9	20 1 39·70	+ 2·3524	+ ·0015	− 1	+32 0 17·4	+10·148	+ ·291	− 12	1, 1	16·70, 16·70	5150
1899	69 Drac.....	6·6	20 1 44·34	− 1·6439	− ·1299	− 60	+76 16 22·8	+10·154	− ·210	− 55	11, 11	14·27, 14·07	5154
1900	BD + 47° 3004.....	6·0	20 2 14·13	+ 1·7941	− ·0005	+ 6	+48 0 56·1	+10·191	+ ·221	+ 1	5, 7	16·23, 16·33	27869

No.	STAR	M	1925·0 R.A.	1925·0 Prec.	1925·0 Sec. Var.	P.M. s ·0000	1925·0 Dec.	1925·0 Prec.	1925·0 Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
1901	BD + 38° 3896	6·6	20 2 25·44	+ 2·1658	+ ·0015	+217	+38 15 39·7	+10·205	+ ·267	+105	5, 6	18·05, 17·80	27876
1902	Gr. 3036	6·2	20 3 4·75	+ 1·6230	− ·0022	+ 27	+51 37 24·5	+10·255	+ ·199	+ 32	6, 5	16·47, 16·85	27885
1903	b^1 Cygn	5·7	20 3 34·81	+ 2·2469	+ ·0016	−189	+35 45 60·0	+10·292	+ ·277	−438	2, 2	12·66, 12·66	5157
1904	Gr. 3041	6·4	20 3 39·29	+ 1·3651	− ·0058	− 6	+56 7 25·7	+10·298	+ ·166	+ 78	4, 4	15·21, 15·21	5161
1905	Gr. 3042	5·9	20 4 15·20	+ 1·5568	− ·0038	+242	+52 56 35·0	+10·343	+ ·190	+253	8, 9	18·06, 18·35	5163
1906	66 Drac	5·7	20 4 21·22	+ 0·9406	− ·0141	+177	+61 46 38·5	+10·350	+ ·113	+ 72	5, 5	15·43, 15·43	5165
1907	Br. 2592	6·6	20 4 34·36	+ 0·2688	− ·0340	− 34	+67 48 40·7	+10·367	+ ·029	− 10	5, 5	14·87, 14·87	27909
1908	BD + 34° 3881	6·2	20 4 49·17	+ 2·2959	+ ·0016	− 10	+34 12 16·4	+10·385	+ ·282	− 17	5, 5	18·67, 18·67	27938
1909	Gr. 3047	7·0	20 5 3·03	+ 1·7109	− ·0012	+ 14	+50 0 41·3	+10·402	+ ·209	− 22	7, 7	19·72, 17·54	27937
1910	BD + 65° 1433	6·9	20 6 22·78	+ 0·5053	− ·0265	+ 17	+66 5 20·9	+10·502	+ ·058	− 8	5, 5	19·78, 19·78	27957
1911	b^2 Cygn	5·0	20 6 38·41	+ 2·2275	+ ·0016	− 4	+36 37 4·8	+10·521	+ ·272	+ 9	2, 2	14·62, 14·62	5170
1912	18 Vulp	5,6	20 7 25·69	+ 2·5024	+ ·0012	0	+26 40 52·0	+10·579	+ ·305	− 7	3, 3	19·58, 19·58	5173
1913	θ Aqil F	3·2	20 7 26·153	+ 3·0935	− ·0043	+ 21*	− 1 2 41·89	+10·580	+ ·378	+ 3*	26, 50	18·25, 17·54	5171
1914	Br. 2581	6·2	20 7 45·38	+ 2·6395	+ ·0005	+ 9	+20 54 37·6	+10·604	+ ·322	+ 32	6, 6	20·60, 20·60	28013
1915	20 Vulp	6·0	20 8 51·93	+ 2·5152	+ ·0012	− 3	+26 15 14·2	+10·686	+ ·306	− 16	2, 3	21·08, 17·94	5178
1916	68 Drac	5·9	20 10 21·08	+ 0·9685	− ·0143	+188	+61 51 3·2	+10·796	+ ·114	+ 80	3, 3	13·36, 13·36	5184
1917	Gr. 3087	6·5	20 10 26·58	+ 1·6709	− ·0017	− 7	+51 14 14·3	+10·803	+ ·200	− 24	3, 3	16·01, 16·01	5183
1918	o^1 Cygn	4·9	20 10 56·55	+ 1·8846	+ ·0003	+ 14	+46 35 17·1	+10·840	+ ·226	− 9	3, 3	13·05, 13·05	5186
1919	21 Vulp	5·4	20 11 9·59	+ 2·4637	+ ·0015	+ 5	+28 28 0·3	+10·855	+ ·297	− 25	3, 4	19·00, 19·63	5185
1920	Gr. 3088	6·5	20 11 11·29	+ 2·0198	+ ·0012	− 14	+43 9 2·9	+10·858	+ ·243	+ 5	5, 5	16·03, 16·03	28098
1921	o^2 Cygn	3·9	20 11 16·20	+ 1·8888	+ ·0004	+ 2	+46 30 46·9	+10·864	+ ·227	+ 1	2, 2	15·64, 15·64	5187
1922	κ Ceph S	4·4	20 11 26·743	− 1·9846	− ·1692	+ 38*	+77 29 10·56	+10·876	− ·248	+ 26*	20, 20	20·41, 20·41	5199
1923	33 Cygn S	4·4	20 11 39·281	+ 1·3883	− ·0057	+ 73*	+56 20 16·39	+10·892	+ ·165	+ 82*	17, 15	19·63, 19·61	5191
1924	23 Vulp	4·8	20 12 39·62	+ 2·4885	+ ·0014	− 32	+27 35 59·7	+10·966	+ ·298	+ 6	2, 2	20·66, 20·66	5195
1925	32 Cygn	4·2	20 13 9·19	+ 1·8544	+ ·0001	+ 5	+47 28 59·4	+11·001	+ ·221	+ 2	1, 3	14·75, 13·71	5200
1926	Br. 2605	7·1	20 13 20·28	+ 2·4905	+ ·0015	+ 5	+27 32 39·1	+11·015	+ ·299	− 9	4, 4	19·62, 19·62	28173
1927	α^1 Capr	4·5	20 13 29·53	+ 3·3251	− ·0085	+ 10	−12 44 28·	+11·026	+ ·400	+ 6	2, 0	17·68,	5197
1928	24 Vulp S	5·7	20 13 34·494	+ 2·5658	+ ·0011	+ 13*	+24 26 20·78	+11·032	+ ·308	− 20*	11, 10	18·55, 18·34	5201
1929	Gr. 3110	6·1	20 13 34·62	+ 1·9434	+ ·0008	+ 2	+45 20 56·4	+11·033	+ ·232	− 58	3, 4	19·69, 18·96	5203
1930	α^2 Capr F	5·5	20 13 53·7	+ 3·3256	− ·0086	+ 4*	−12 46 41·85	+11·056	+ ·400	− 9*	0, 1	17·74	5202
1931	Br. 2613	5·7	20 14 15·14	+ 2·1340	+ ·0017	+ 2	+40 7 56·6	+11·082	+ ·254	− 12	2, 2	11·71, 11·71	5205
1932	BD + 28° 3695	7·0	20 14 27·18	+ 2·4581	+ ·0016	− 12	+28 54 49·1	+11·096	+ ·294	+ 32	5, 5	20·78, 20·78	28208
1933	Gr. 3117	7·5	20 14 32·87	+ 2·1273	+ ·0017	+ 15	+40 21 28·8	+11·103	+ ·254	− 17	5, 6	20·44, 19·98	28204
1934	Gr. 3121	7·3	20 14 54·84	+ 2·0548	+ ·0014	+ 8	+42 29 17·4	+11·130	+ ·244	− 1	5, 5	15·26, 15·26	28214
1935	P Cygn	5·1	20 15 1·29	+ 2·2111	+ ·0019	− 10	+37 47 55·6	+11·138	+ ·263	− 11	1, 1	11·72, 11·72	5208
1936	Br 2618	6·2	20 15 27·51	+ 2·1252	+ ·0017	+ 3	+40 29 51·4	+11·169	+ ·252	− 11	4, 5	17·91, 17·27	5210
1937	36 Cygn	5·8	20 15 39·96	+ 2·2443	+ ·0019	+ 29	+36 45 51·4	+11·185	+ ·267	+ 29	5, 6	19·43, 19·45	5211
1938	Gr. 3142	6·2	20 16 33·62	+ 1·4837	− ·0043	− 8	+55 9 44·1	+11·250	+ ·175	− 20	2, 4	13·11, 12·38	5218
1939	Gr. 3150	6·2	20 16 46·56	+ 0·5171	− ·0287	+792	+66 36 40·8	+11·266	+ ·058	+295	2, 2	15·12, 14·68	5219
1940	β Capr F	3·2	20 16 47·956	+ 3·3694	− ·0097	+ 24*	−15 1 9·64	+11·267	+ ·401	+ 1*	6, 6	20·26, 19·47	5216
1941	Gr. 3140	6·5	20 17 32·11	+ 2·1744	+ ·0019	− 7	+39 9 57·6	+11·320	+ ·257	− 20	4, 4	18·36, 18·56	5220
1942	Gr. 3143	6·1	20 17 32·98	+ 1·9067	+ ·0006	− 4	+46 35 58·7	+11·321	+ ·224	+ 8	5, 5	18·85, 18·85	28297
1943	71 Drac	5·8	20 18 21·77	+ 1·0022	− ·0144	+ 11	+62 1 9·0	+11·380	+ ·115	+ 30	2, 1	15·06, 15·57	5225
1944	BD + 53° 2384	5·9	20 18 31·06	+ 1·5946	− ·0027	− 22	+53 21 25·0	+11·391	+ ·186	+ 13	5, 5	15·82, 15·82	28311
1945	25 Vulp	5·7	20 18 49·93	+ 2·5790	+ ·0012	− 9	+24 12 22·2	+11·413	+ ·304	− 13	3, 3	19·63, 19·63	5224
1946	BD + 40° 4136	6·3	20 19 23·69	+ 2·1231	+ ·0018	− 8	+40 53 29·9	+11·454	+ ·249	− 32	6, 7	19·46, 19·60	28330
1947	γ Cygn S	2·2	20 19 32·136	+ 2·1526	+ ·0019	+ 1*	+40 0 57·22	+11·464	+ ·252	− 3*	14, 10	14·18, 14·39	5229
1948	BD + 30° 4005	6·5	20 19 36·26	+ 2·4137	+ ·0019	0	+31 1 27·9	+11·469	+ ·284	− 29	5, 6	20·78, 20·74	28347
1949	Gr. 3151	5·9	20 19 38·43	+ 1·9556	+ ·0009	+ 32	+45 33 12·3	+11·471	+ ·229	+ 32	3, 3	19·63, 19·63	5130
1950	Gr. 3154	6·3	20 20 5·54	+ 2·1287	+ ·0019	+ 8	+40 47 7·6	+11·503	+ ·249	− 53	3, 3	19·70, 19·70	5231

No.	STAR	M	1925·0 R.A.	1925·0 Prec.	1925·0 Sec. Var.	P.M. s ·0000	1925·0 Dec.	1925·0 Prec.	1925·0 Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
1951	BD + 63° 1618	5·8	20 20 7·80	+ 0·8549	− ·0187	− 10	+63 44 21·0	+11·506	+ ·097	+ 24	4, 4	14·66, 14·66	28340
1952	Gr. 3157	5·8	20 20 20·38	+ 2·0623	+ ·0016	+ 44	+42 44 26·1	+11·522	+ ·241	+ 35	3, 4	16·35, 16·90	28364
1953	BD + 37° 3916	6·0	20 20 56·02	+ 2·2433	+ ·0021	− 2	+37 14 0·9	+11·564	+ ·262	− 3	1, 2	21·66, 21·60	5236
1954	Gr. 3167	6·5	20 21 5·04	+ 1·5472	− ·0034	+ 24	+54 25 49·7	+11·575	+ ·179	− 4	5, 5	19·59, 19·59	28375
1955	Gr. 3174	6·7	20 23 21·79	+ 2·1588	+ ·0021	+ 7	+40 9 18·3	+11·737	+ ·250	+ 6	6, 6	18·85, 18·85	28439
1956	Gr. 3184	6·4	20 23 31·79	+ 1·2453	− ·0093	+ 10	+59 21 16·1	+11·749	+ ·142	− 7	10, 7	19·93, 19·74	28434
1957	Gr. 3181	7·0	20 23 36·01	+ 1·5587	− ·0033	− 18	+54 26 16·8	+11·754	+ ·179	− 7	5, 5	19·27, 19·27	28438
1958	Gr. 3191	6·7	20 24 34·74	+ 1·4492	− ·0051	+ 27	+56 23 27·1	+11·823	+ ·165	+ 6	4, 6	12·16, 12·00	5250
1959	43 Cygn	5·9	20 24 44·69	+ 1·8262	+ ·0000	+ 74	+49 8 1·2	+11·834	+ ·209	+ 57	4, 4	12·17, 11·94	5251
1960	40 Cygn	5·8	20 24 47·56	+ 2·2244	+ ·0022	− 16	+38 11 36·8	+11·838	+ ·256	− 71	3, 3	12·66, 12·66	5249
1961	Br. 2641	6·7	20 26 11·78	+ 1·8523	+ ·0003	− 11	+48 40 8·2	+11·937	+ ·212	− 20	5, 5	19·22, 19·22	28501
1962	42 Cygn	6·1	20 26 28·72	+ 2·2877	+ ·0024	+ 9	+36 12 13·1	+11·957	+ ·262	− 8	4, 3	12·35, 12·23	5258
1963	BD + 65° 1466	6·6	20 26 58·10	+ 0·7223	− ·0242	+ 1	+65 30 21·4	+11·991	+ ·079	− 26	5, 5	20·35, 20·35	28509
1964	B.A.C. 7086	6·0	20 27 34·71	+ 1·4993	− ·0044	+ 5	+55 48 58·0	+12·033	+ ·170	+ 16	4, 5	13·65, 12·86	5264
1965	BD + 20° 4602	6·0	20 27 36·82	+ 2·6764	+ ·0007	+ 63	+20 21 5·9	+12·036	+ ·307	+ 43	6, 6	20·31, 20·31	28540
1966	θ Ceph S	4·3	20 28 19·516	+ 1·0036	− ·0156	+ 66*	+62 44 30·20	+12·086	+ ·112	− 18*	9, 10	16·88, 16·47	5270
1967	Pi 20h, 199	6·8	20 28 33·99	+ 1·8491	+ ·0003	− 1	+48 57 34·4	+12·102	+ ·209	− 5	3, 3	19·68, 19·68	5269
1968	Gr. 3213	6·0	20 29 12·52	+ 1·7096	− ·0012	+ 35	+52 3 12·1	+12·147	+ ·193	+ 7	5, 4	19·25, 18·90	28574
1969	ε Dlph F	4·1	20 29 37·780	+ 2·8655	− ·0013	+ 6*	+11 2 51·09	+12·177	+ ·327	− 26*	24, 54	17·62, 16·54	5272
1970	Gr. 3221	6·5	20 29 56·60	+ 1·4692	− ·0049	− 25	+56 31 29·0	+12·198	+ ·165	− 4	3, 3	13·33, 13·33	5276
1971	Br. 2673	6·6	20 30 20·75	− 0·2408	− ·0690	− 2	+72 16 40·1	+12·227	− ·033	− 25	7, 6	13·68, 13·92	5280
1972	47 Cygn	5·0	20 30 59·12	+ 2·3331	+ ·0025	− 2	+34 59 37·0	+12·271	+ ·263	− 14	2, 3	20·53, 20·54	5279
1973	Gr. 3234	6·6	20 31 23·86	+ 1·5911	− ·0029	+ 36	+54 32 39·1	+12·299	+ ·178	+ 17	5, 5	19·64, 19·64	28635
1974	Gr. 3226	5·8	20 31 27·46	+ 1·9636	+ ·0014	+ 28	+46 26 8·4	+12·303	+ ·221	− 3	4, 4	13·16, 12·66	5283
1975	Pi 20h, 265	6·7	20 32 16·36	+ 0·1413	− ·0498	− 12	+70 16 29·7	+12·360	+ ·011	− 19	10, 8	18·44, 18·44	28643
1976	73 Drac S	5·3	20 32 30·974	− 0·7691	− ·1040	+ 27*	+74 41 52·52	+12·376	− ·094	− 12*	20, 19	17·75, 18·55	5290
1977	Pi 20h, 236	6·5	20 32 39·37	+ 1·7474	− ·0007	− 4	+51 35 41·6	+12·386	+ ·195	− 3	10, 9	16·26, 16·32	28667
1978	26 Vulp	6·6	20 32 55·41	+ 2·5694	+ ·0018	+ 14	+25 37 18·1	+12·404	+ ·289	+ 2	3, 4	21·33, 20·88	5287
1979	β Dlph F	3·7	20 34 1·920	+ 2·8056	− ·0004	+ 74*	+14 19 59·83	+12·480	+ ·315	− 37*	15, 34	18·47, 16·78	5291
1980	ι Dlph	5·5	20 34 13·90	+ 2·8675	− ·0012	+ 30	+11 6 54·2	+12·494	+ ·322	− 18	4, 4	19·39, 19·39	5292
1981	BD + 17° 4370	6·0	20 34 29·46	+ 2·7335	+ ·0004	+ 10	+18 0 15·0	+12·512	+ ·306	+ 98	5, 5	19·49, 19·49	28720
1982	BD + 37° 4002	6·4	20 34 34·20	+ 2·2554	+ ·0027	+ 5	+38 4 1·4	+12·517	+ ·251	− 44	5, 5	20·65, 20·65	28714
1983	29 Vulp	4·8	20 35 10·32	+ 2·6743	+ ·0010	+ 41	+20 56 13·8	+12·558	+ ·298	− 1	2, 2	20·60, 20·60	5301
1984	28 Vulp	5·1	20 35 15·87	+ 2·6124	+ ·0015	− 2	+23 51 7·5	+12·564	+ ·291	− 11	2, 2	21·16, 21·16	5303
1985	BD + 23° 4085	6·3	20 35 18·25	+ 2·6219	+ ·0014	+ 7	+23 24 59·4	+12·567	+ ·292	− 7	7, 7	21·41, 21·41	28745
1986	7 Dlph	5·3	20 35 29·2	+ 2·8927	− ·0016	+213	+ 9 49 16·7	+12·580	+ ·323	+ 12	0, 2	12·58	5304
1987	Br. 2667	6·3	20 35 36·28	+ 2·7830	− ·0001	− 1	+15 34 25·2	+12·588	+ ·311	− 25	1, 1	11·77, 11·77	5307
1988	BD + 21° 4305	5·9	20 35 50·69	+ 2·6624	+ ·0011	+ 10	+21 33 7·9	+12·604	+ ·296	+ 14	5, 6	21·09, 21·04	28766
1989	Pi 20h 258	6·0	20 35 54·25	+ 2·4713	+ ·0025	− 33	+30 4 15·2	+12·608	+ ·274	− 79	5, 5	20·04, 20·04	5309
1990	α Dlph F	3·9	20 36 9·252	+ 2·7821	− ·0001	+ 44*	+15 38 47·46	+12·625	+ ·310	− 8*	23, 34	16·20, 16·42	5310
1991	B.A.C. 7230	6·4	20 36 42·01	− 5·8362	− ·7793	+132	+83 22 2·8	+12·662	− ·665	− 26	9, 8	21·26, 21·21	5324
1992	Gr. 3248	6·2	20 36 48·58	+ 2·1942	+ ·0028	+ 10	+40 18 49·3	+12·670	+ ·242	− 14	4, 4	19·34, 19·34	5313
1993	BD + 42° 3818	6·3	20 37 25·95	+ 2·1027	+ ·0025	− 68	+43 11 36·8	+12·712	+ ·232	− 63	5, 7	12·79, 12·48	28809
1994	BD + 29° 4131	6·5	20 37 29·47	+ 2·4874	+ ·0024	+ 3	+29 32 15·1	+12·716	+ ·275	+ 36	5, 6	19·39, 19·29	28816
1995	10 Dlph	6·4	20 37 45·51	+ 2·8095	− ·0004	− 7	+14 18 53·9	+12·734	+ ·311	− 6	3, 3	19·67, 19·67	5317
1996	Gr. 3263	6·2	20 38 42·43	+ 1·2745	− ·0093	+ 3	+60 14 0·3	+12·797	+ ·137	+186	2, 2	15·10, 15·10	5321
1997	α Cygn S	1·0	20 38 52·443	+ 2·0445	+ ·0022	+ 0*	+45 0 42·06	+12·809	+ ·224	− 1*	18, 18	16·32, 16·42	5320
1998	Gr. 3258	5·8	20 39 13·88	+ 2·1662	+ ·0028	+ 13	+41 26 52·1	+12·833	+ ·237	+ 9	6, 6	14·00, 14·00	5322
1999	51 Cygn	5·5	20 39 53·87	+ 1·8494	+ ·0006	+ 6	+50 4 12·2	+12·877	+ ·201	+ 0	6, 5	13·68, 13·51	5325
2000	δ Dlph	4·5	20 39 57·53	+ 2·8022	− ·0002	− 16	+14 48 16·5	+12·882	+ ·308	− 51	2, 5	12·64, 12·58	5323

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			h	m	s	s	s		°	′	″	″	″				
2001	BD + 35° 4324	6–7	20	40	27·93	+ 2·3488	+ ·0030	− 11	+35	19	0·2	+12·916	+ ·256	− 4	7, 8	18·68, 18·69	28886
2002	Gr. 3274	6·2	20	41	3·79	+ 1·2827	− ·0094	− 7	+60	19	51·1	+12·956	+ ·137	− 13	8, 7	15·54, 15·52	28894
2003	4 Ceph	5·7	20	42	15·06	+ 0·7509	− ·0262	+ 38	+66	23	4·2	+13·035	+ ·078	+ 44	3, 3	13·72, 13·72	5333
2004	BD + 55° 2462	6·3	20	42	25·35	+ 1·5564	− ·0035	+ 3	+56	12	55·6	+13·046	+ ·167	− 15	4, 5	12·82, 12·59	28926
2005	ε Cygn S	2·5	20	43	10·583	+ 2·3984	+ ·0030	+288*	+33	41	18·40	+13·096	+ ·259	+323*	15, 15	17·18, 16·77	5336
2006	Pi 20h, 332	4·6	20	43	29·56	+ 1·4982	− ·0047	− 82	+57	18	36·7	+13·117	+ ·160	−232	1, 1	14·70, 14·70	5344
2007	ε Aqar F	3·8	20	43	37·039	+ 3·2467	− ·0084	+ 19*	+ 9	46	16·43	+13·125	+ ·352	− 34*	30, 44	18·37, 17·59	5337
2008	η Ceph S	3·5	20	43	45·990	+ 1·2100	− ·0115	+131*	+61	32	49·82	+13·135	+ ·128	+820*	11, 8	18·76, 19·59	5346
2009	Gr. 3278	6·8	20	44	7·17	+ 2·0195	− ·0023	− 27	+46	15	22·3	+13·158	+ ·216	− 14	7, 7	19·66, 19·66	28977
2010	Gr. 3285	6·4	20	44	10·82	+ 1·7488	− ·0005	− 91	+52	43	19·3	+13·162	+ ·187	−108	5, 5	14·46, 14·46	28975
2011	λ Cygn	4·7	20	44	29·15	+ 2·3356	+ ·0032	+ 3	+36	12	52·4	+13·183	+ ·251	− 11	1, 1	16·65, 16·65	5350
2012	T Cygn	Var.	20	44	11·15	+ 2·3906	+ ·0032	+ 36	+34	5	51·8	+13·164	+ ·258	+ 10	2, 2	20·62, 20·62	5345
2013	Gr. 3284	6·6	20	44	46·34	+ 2·0565	+ ·0026	+ 1	+45	18	13·1	+13·201	+ ·220	− 26	5, 5	19·85, 19·85	28997
2014	BD + 47° 3188	5·9	20	45	21·07	+ 1·9757	+ ·0021	+ 20	+47	33	17·4	+13·240	+ ·211	+ 14	2, 2	21·14, 21·14	5355
2015	Gr. 3295	6·4	20	45	38·43	+ 1·7839	+ ·0000	+ 69	+52	7	59·3	+13·259	+ ·189	−159	5, 5	20·40, 20·40	29021
2016	55 Cygn	5·2	20	46	22·93	+ 2·0438	+ ·0026	+ 3	+45	50	6·7	+13·307	+ ·217	− 4	2, 2	15·25, 15·25	5361
2017	BD + 51° 2957	6·7	20	46	26·82	+ 1·8108	+ ·0004	+ 23	+51	37	52·9	+13·311	+ ·192	+ 11	3, 3	20·71, 20·71	5362
2018	Gr. 3302	7·2	20	47	22·40	+ 2·0281	+ ·0025	+ 4	+46	22	51·9	+13·372	+ ·214	− 1	5, 5	14·02, 14·02	29065
2019	56 Cygn	5·1	20	47	24·89	+ 2·1191	+ ·0030	+114	+43	46	32·3	+13·375	+ ·224	+128	2, 2	12·69, 12·69	5365
2020	BD + 63° 1663	6·4	20	47	58·94	+ 1·0578	− ·0164	− 17	+63	45	44·1	+13·411	+ ·109	− 6	5, 5	19·38, 19·38	29069
2021	76 Drac P	5·9	20	48	6·964	− 4·2256	− ·5529	+163*	+82	15	17·69	+13·420	− ·463	+ 26*	236, 152	17·74, 17·36	5377
2022	T Vulp	Var.	20	48	17·16	+ 2·5461	+ ·0027	+ 5	+27	58	7·2	+13·432	+ ·270	− 13	4, 5	19·90, 19·67	5370
2023	μ Aqar F	4·8	20	48	36·612	+ 3·2344	− ·0083	+ 25*	− 9	15	56·64	+13·452	+ ·344	− 35*	3, 2	15·38, 14·69	5371
2024	BD + 29° 4221	6·6	20	49	58·44	+ 2·5183	+ ·0029	− 4	+29	21	59·1	+13·540	+ ·265	− 47	5, 5	19·00, 19·00	29136
2025	57 Cygn	4·8	20	50	35·47	+ 2·1202	+ ·0033	+ 16	+44	6	9·0	+13·581	+ ·222	+ 6	1, 1	14·76, 14·76	5375
2026	Gr. 3319	5·7	20	50	41·32	+ 2·0939	+ ·0032	+ 24	+44	53	49·2	+13·587	+ ·219	− 3	3, 3	11·98, 11·98	5376
2027	BD + 32° 3980	5·9	20	50	51·51	+ 2·4315	+ ·0033	− 6	+33	9	7·0	+13·598	+ ·255	+ 41	2, 2	20·60, 20·60	5378
2028	Br. 2749 S	5·7	20	51	2·442	− 2·6501	− ·3245	−101*	+80	16	18·37	+13·609	− ·290	− 30*	23, 22	20·30, 20·22	5388
2029	32 Vulp S	5·3	20	51	21·775	+ 2·5568	+ ·0027	− 7*	+27	46	17·85	+13·630	+ ·267	− 2*	14, 12	19·17, 19·32	5379
2030	17 Dlph	5·4	20	52	3·64	+ 2·8394	− ·0004	+ 9	+13	26	4·2	+13·674	+ ·297	− 19	2, 2	20·13, 20·13	5385
2031	Br. 2720	5·9	20	53	17·80	+ 2·0256	+ ·0029	+ 2	+47	7	46·2	+13·753	+ ·209	− 5	4, 3	14·19, 14·02	5389
2032	Gr. 3337	6·9	20	53	55·97	+ 2·1155	+ ·0034	− 8	+44	38	8·9	+13·794	+ ·218	+ 7	8, 7	16·52, 16·65	29241
2033	Br. 2725	6·3	20	53	58·62	+ 1·9613	+ ·0024	+ 6	+48	54	24·8	+13·796	+ ·202	+ 6	4, 4	19·41, 17·86	29239
2034	Gr. 3341	5·9	20	54	2·61	+ 1·8996	+ ·0018	+ 34	+50	26	24·1	+13·801	+ ·195	− 18	2, 2	20·14, 20·14	5392
2035	Br. 2727	6·3	20	54	16·65	+ 1·6045	− ·0026	+ 11	+56	35	54·0	+13·816	+ ·163	+ 6	3, 3	12·64, 12·64	5394
2036	ν Cygn S	4·0	20	54	22·523	+ 2·2351	+ ·0038	+ 4*	+40	52	40·15	+13·822	+ ·230	− 24*	19, 18	16·75, 16·98	5393
2039	18 Dlph	5·6	20	54	49·22	+ 2·8929	− ·0012	− 44	+10	32	57·4	+13·850	+ ·298	− 53	6, 8	19·38, 19·41	5395
2038	Br. 2726	5·9	20	55	38·23	+ 2·1373	+ ·0037	+ 98	+44	10	44·0	+13·901	+ ·218	+ 68	4, 2	14·68, 14·71	5401
2039	Br. 2748	6·1	20	55	38·66	− 0·6863	− ·1201	+ 97	+75	38	8·0	+13·902	− ·078	+ 45	10, 11	18·86, 18·21	29254
2040	BD + 41° 3949	6·4	20	55	44·40	+ 2·2170	+ ·0039	− 4	+41	38	53·9	+13·908	+ ·227	+ 13	5, 5	18·29, 18·29	29284
2041	11 Aqar	6·5	20	56	36·87	+ 3·1570	− ·0066	+ 29	− 5	1	15·9	+13·963	+ ·324	−136	2, 7	12·64, 12·57	5406
2042	f^1 Cygn	4·9	20	57	16·54	+ 2·0393	+ ·0032	+ 7	+47	13	40·1	+14·004	+ ·207	+ 3	1, 2	11·74, 11·71	5410
2043	Br. 2738	5·9	20	57	34·45	+ 1·4744	− ·0054	+ 62	+59	8	42·2	+14·023	+ ·146	+ 4	4, 4	13·69, 13·69	5412
2044	BD + 35° 4357	6·1	20	58	13·65	+ 2·3878	+ ·0040	− 14	+35	43	52·8	+14·064	+ ·242	+ 9	5, 6	18·49, 18·53	29350
2045	60 Cygn	5·5	20	58	33·71	+ 2·0931	+ ·0036	+ 2	+45	51	38·3	+14·085	+ ·211	+ 3	7, 7	13·83, 13·54	5414
2046	Gr. 3371	6·7	20	59	43·34	+ 2·1433	+ ·0039	− 16	+44	29	40·3	+14·156	+ ·215	+ 2	6, 6	19·14, 19·27	29388
2047	Gr. 3375	6·4	20	59	52·78	+ 1·6294	− ·0021	− 11	+56	45	31·6	+14·166	+ ·162	+ 7	5, 5	18·35, 18·35	29386
2048	Gr. 3378	6·0	21	0	5·00	+ 1·6526	− ·0016	+ 25	+56	22	23·1	+14·179	+ ·165	0	5, 5	13·07, 13·07	5421
2049	BD + 46° 3159	6·8	21	1	7·68	+ 2·0797	+ ·0037	− 57	+46	33	57·9	+14·243	+ ·207	−110	5, 5	19·29, 19·29	29427
2050	Gr. 3383	6·2	21	1	30·05	+ 1·8277	+ ·0012	+ 59	+52	59	11·9	+14·266	+ ·181	+ 16	7, 7	19·51, 19·51	29438

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2051	ξ Cygn.....S	3·9	21 2 12·067	+ 2·1808	+ ·0042	+ 6*	+43 37 40·71	+14·309	+ ·216	− 3*	25, 26	14·31, 14·34	5431
2052	Pi 20h, 473.....	6·3	21 3 7·63	+ 2·6056	+ ·0030	+ 25	+26 37 24·5	+14·366	+ ·259	− 17	4, 6	17·97, 18·70	29491
2053	61¹ Cygn.....	5·5	21 3 27·65	+ 2·3360	+ ·0045	+3538	+38 22 47·1	+14·391	+ ·231	+3·250	6, 5	13·17, 12·86	5433
2054	f² Cygn.....	4·8	21 4 1·05	+ 2·0653	+ ·0038	+ 11	+47 20 48·1	+14·420	+ ·203	− 8	2, 2	12·62, 12·62	5436
2055	BD + 15° 4340.....	6·9	21 4 2·00	+ 2·8179	+ ·0004	+ 28	+15 21 26·5	+14·421	+ ·279	− 58	5, 6	19·07, 19·15	29530
2056	ν Aqar.....F	4·6	21 5 30·620	+ 3·2633	− ·0097	+ 63*	−11 40 34·63	+14·510	+ ·322	− 13*	30, 48	18·71, 17·93	5441
2057	Gr. 3409.....	6·0	21 5 57·04	+ 0·3808	− ·0512	−114	+71 7 52·4	+14·537	+ ·032	−108	10, 10	19·26, 19·26	29550
2058	BD + 67° 1288.....	6·9	21 6 40·89	+ 0·8089	+ ·0291	+ 52	+67 56 59·1	+14·581	+ ·075	+ 11	6, 6	19·98, 19·98	29575
2059	77 Drac.....S	6·1	21 7 1·690	− 1·1696	− ·1804	+ 83*	+77 49 21·19	+14·602	− ·123	+ 33*	22, 21	16·83, 16·65	5450
2060	Pi 21h, 32.....	5·8	21 7 56·39	+ 1·8517	+ ·0019	+ 25	+53 15 23·3	+14·657	+ ·178	− 3	5, 5	18·80, 18·80	5447
2061	ζ Cygn.....S	3·3	21 9 44·583	+ 2·5526	+ ·0040	− 2*	+29 55 6·95	+14·763	+ ·245	− 59*	14, 15	15·63, 15·98	5452
2062	Pi 21h, 51 (m).....	5·8	21 9 53·68	+ 1·5284	− ·0042	− 5	+59 40 39·7	+14·772	+ ·144	+ 3	9, 9	14·36, 13·91	5453
2063	Pi 21h, 43.....	6·3	21 10 25·44	+ 2·4104	+ ·0049	− 18	+36 19 22·7	+14·804	+ ·231	+ 6	5, 5	18·71, 18·71	29682
2064	Pi 21h, 61.....	7·2	21 10 52·80	+ 1·5289	− ·0041	− 4	+59 47 16·7	+14·830	+ ·143	− 12	2, 3	18·68, 18·97	5458
2065	BD + 29° 4354.....	7·0	21 10 57·92	+ 2·5625	+ ·0040	− 2	+29 35 24·0	+14·835	+ ·245	+ 6	5, 5	18·89, 18·89	29695
2066	τ Cygn.....	3·8	21 11 47·59	+ 2·3804	+ ·0051	+132	+37 43 28·3	+14·884	+ ·226	+427	10, 11	12·11, 12·08	5460
2067	α Equl.....F	4·0	21 12 4·514	+ 2·9956	− ·0028	+ 38*	+ 4 56 13·39	+14·900	+ ·286	− 87*	22, 46	18·36, 18·05	5461
2068	BD + 63° 1708.....	6·4	21 12 10·09	+ 1·2332	− ·0129	+ 35	+64 5 41·3	+14·906	+ ·114	−103	6, 6	20·31, 20·31	29718
2069	Pi 21h, 88.....	6·8	21 12 58·28	+ 0·6648	− ·0378	− 20	+69 42 57·6	+14·953	+ ·058	− 5	5, 5	21·06, 21·06	29733
2070	BD + 41° 4067.....	6·3	21 13 38·77	+ 2·2759	+ ·0054	+ 0	+41 56 17·4	+14·992	+ ·214	− 28	6, 5	16·70, 16·09	29766
2071	Gr. 3424.....	6·0	21 14 32·86	+ 2·2674	+ ·0055	+ 11	+42 22 6·6	+15·044	+ ·212	− 8	5, 5	18·69, 18·50	29791
2072	Gr. 3548.....P	7·7	21 14 36·633	−12·3742	−3·5501	+ 22*	+86 43 45·31	+15·048	−1·198	+ 14*	111, 67	16·75, 16·35	5499
2073	BD + 53° 2588.....	6·0	21 14 41·21	+ 1·8724	+ ·0026	+ 34	+53 40 54·6	+15·052	+ ·174	+ 33	5, 4	17·13, 18·48	29789
2074	BD + 57° 2309.....	6·5	21 15 15·21	+ 1·6482	− ·0013	− 3	+58 17 46·5	+15·085	+ ·152	+ 4	6, 7	20·50, 20·68	29804
2075	A Cygn.....	5·0	21 15 39·27	+ 2·2357	+ ·0055	− 14	+43 37 47·4	+15·108	+ ·208	− 23	3, 4	14·29, 14·22	5474
2076	Gr. 3429.....	6·8	21 16 1·27	+ 2·3181	+ ·0056	− 8	+40 43 25·6	+15·129	+ ·215	+ 9	4, 5	19·94, 18·28	29836
2077	BD + 37° 4271.....	6·3	21 16 22·66	+ 2·3911	+ ·0055	+ 6	+37 55 12·9	+15·150	+ ·222	− 6	5, 4	20·44, 20·38	29847
2078	BD + 80° 690.....	6·0	21 16 32·08	− 2·3963	− ·3639	− 14	+80 55 1·1	+15·159	− ·235	+ 2	10, 10	21·50, 21·50	29792
2079	Br. 2796.....	6·4	21 16 32·86	− 0·6249	− ·1371	+ 49	+76 41 48·1	+15·158	− ·065	+ 10	1, 3	14·08, 13·96	5486
2080	α Ceph.....S	2·4	21 16 47·378	+ 1·4118	− ·0074	+217*	+62 16 2·94	+15·173	+ ·128	+ 49*	11, 13	20·70, 20·15	5480
2081	Gr. 3432.....	5·8	21 16 53·82	+ 2·0620	+ ·0049	+ 14	+49 11 32·7	+15·180	+ ·190	− 4	3, 3	19·69, 19·69	5478
2082	B.A.C. 7417.....	5·9	21 17 11·15	+ 1·6614	− ·0009	+ 10	+58 18 21·0	+15·196	+ ·151	− 11	3, 5	13·40, 14·52	5481
2083	34 Vulp.....	6·0	21 17 40·83	+ 2·6941	+ ·0031	+154	+23 32 22·3	+15·224	+ ·250	−136	3, 3	20·34, 20·34	5482
2084	BD + 32° 4134.....	6·1	21 18 12·32	+ 2·5249	+ ·0049	+ 11	+32 17 36·4	+15·254	+ ·232	− 12	6, 7	20·84, 20·69	29896
2085	1 Pegs.....F	4·3	21 18 37·032	+ 2·7667	+ ·0020	+ 72*	+19 28 58·04	+15·277	+ ·255	+ 58*	4, 9	18·43, 18·69	5489
2086	Gr. 3438.....	6·8	21 18 37·71	+ 2·1641	+ ·0056	+ 36	+46 24 35·0	+15·278	+ ·198	+ 7	6, 5	21·74, 21·34	29906
2087	B.A.C. 7430.....	6·8	21 18 37·88	+ 1·5476	− ·0036	− 57	+60 26 14·9	+15·278	+ ·140	+ 1	5, 5	21·37, 21·37	29898
2088	Gr. 3441.....	6·0	21 19 24·00	+ 2·0793	+ ·0051	+ 40	+49 4 0·4	+15,321	+ ·189	+ 63	6, 6	13·71, 13·71	5495
2089	BD + 29° 4397.....	6·5	21 19 28·47	+ 2·5757	+ ·0046	+ 8	+29 59 18·5	+15·326	+ ·236	+ 5	5, 5	19·49, 19·49	29933
2090	Br. 2832.....	7·2	21 19 29·95	− 5·0441	− ·9228	+134	+83 56 36·4	+15·327	− ·480	− 11	4, 2	21·22, 21·22	5509
2091	Pi 21h, 114.....	5·8	21 20 35·98	+ 2·6924	+ ·0033	+ 90	+23 57 4·6	+15·388	+ ·245	+ 18	3, 3	19·98, 19·98	5498
2092	BD + 24° 4394.....	6·3	21 20 46·56	+ 2·6741	+ ·0036	+ 25	+24 59 22·0	+15·399	+ ·243	+ 1	6, 6	20·31, 20·31	29968
2093	Pi 21h, 120.....	5·9	21 21 14·13	+ 2·6593	+ ·0038	+ 28	+25 51 4·7	+15·425	+ ·242	− 7	4, 4	19·43, 19·43	5504
2094	Br. 2792.....	5·6	21 22 34·11	+ 2·1832	+ ·0061	+193	+46 23 20·0	+15·498	+ ·195	+ 46	4, 4	18·20, 18·20	5511
2095	69 Cygn.....	6·1	21 22 43·04	+ 2·4499	+ ·0059	+ 2	+36 20 33·8	+15·507	+ ·220	− 11	2, 2	11·70, 11·70	5512
2096	B.A.C. 7450.....	6·7	21 22 57·55	+ 2·7808	+ ·0021	+ 54	+19 2 59·6	+15·520	+ ·250	+ 14	6, 6	20·17, 20·17	30023
2097	BD + 48° 3390.....	5·3	21 24 11·65	+ 2·1230	+ ·0060	+ 69	+48 30 29·9	+15·588	+ ·187	+ 31	4, 5	13·50, 13·13	5517
2098	Pi 21h, 156.....	6·1	21 24 16·51	+ 1·9756	+ ·0047	+ 26	+52 34 19·9	+15·593	+ ·174	+ 11	4, 5	20·93, 21·08	5518
2099	Pi 21h, 153.....	5·9	21 24 55·80	+ 2·5520	+ ·0053	+ 94	+31 53 46·1	+15·629	+ ·226	+ 62	4, 5	18·44, 18·09	5519
2100	Gr. 3471.....	6·6	21 25 20·97	+ 1·6598	− ·0007	− 16	+59 25 24·1	+15·652	+ ·145	− 14	5, 6	20·85, 20·67	30065

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			h m s	s	s		° ′ ″	″	″				
2101	BD + 21° 4555	6·3	21 25 34·08	+ 2·7384	+ ·0030	+ 29	+21 51 3·5	+15·666	+ ·242	+ 12	6, 5	20·80, 20·80	30078
2102	7 Ceph	5·5	26 19·40	+ 1·1647	− ·0166	− 20	+66 28 53·5	+15·705	+ ·098	− 14	2, 1	12·68, 13·67	5525
2103	Pi 21h, 170	6·6	26 31·11	+ 1·8843	+ ·0036	+ 14	+55 5 23·1	+15·715	+ ·164	+ 11	5, 3	17·31, 21·02	30099
2104	Gr. 3511	6·2	27 5·0	− 1·7138	− ·2895	+181	+80 11 54·8	+15·745	− ·162	− 8	4, 4	13·09, 13·09	5533
2105	Gr. 3476	7·5	27 23·25	+ 1·9929	+ ·0052	+ 19	+52 36 14·7	+15·762	+ ·173	+ 11	3, 3	20·71, 20·71	5528
2106	β Aqar F	2·9	21 27 36·721	+ 3·1580	− ·0070	+ 10*	− 5 54 6·76	+15·775	+ ·277	− 7*	5, 10	16·51, 17·80	5527
2107	β Ceph S	3·3	27 41·910	+ 0·7799	− ·0357	+ 22*	+70 13 52·96	+15·779	+ ·063	+ 5*	22, 21	21·38, 21·32	5532
2108	Gr. 3480	6·2	27 50·36	+ 1·9947	+ ·0052	+ 24	+52 37 38·9	+15·787	+ ·173	+ 7	7, 7	18·44, 18·44	5531
2109	Gr. 3487	6·2	28 56·20	+ 2·0143	+ ·0055	+ 7	+52 17 17·9	+15·846	+ ·173	+ 3	6, 6	20·23, 20·23	30157
2110	BD + 47° 3449	6·8	29 0·52	+ 2·1562	+ ·0067	− 11	+48 15 12·0	+15·850	+ ·186	− 18	8, 7	21·72, 21·13	30160
2111	B.A.C. 7496	6·5	21 29 34·63	+ 2·1635	+ ·0067	− 17	+48 6 43·5	+15·880	+ ·186	− 20	5, 5	19·08, 19·08	30168
2112	Br. 2807	6·5	30 29·19	+ 2·2465	+ ·0071	− 4	+45 31 14·8	+15·928	+ ·192	+ 3	8, 7	12·18, 12·13	30189
2113	Gr. 3500	6·3	31 52·28	+ 2·0660	+ ·0063	+ 7	+51 21 49·9	+16·002	+ ·175	− 1	3, 4	12·96, 12·66	5548
2114	W Cygn	5·7	33 11·30	+ 2·2731	+ ·0075	+ 45	+45 2 17·9	+16·071	+ ·191	+ 6	5, 5	19·10, 19·10	30250
2115	ξ Aqar F	4·8	33 45·645	+ 3·1874	− ·0081	+ 75*	− 8 11 28·54	+16·101	+ ·270	− 24*	29, 61	19·39, 18·66	5551
2116	74 Cygn S	5·2	21 33 56·433	+ 2·4038	+ ·0073	− 4*	+40 4 33·83	+16·110	+ ·202	+ 8*	18, 15	13·49, 13·64	5553
2117	Gr. 3514	7·1	34 35·28	+ 2·2983	+ ·0076	− 4	+44 21 33·9	+16·144	+ ·192	− 28	5, 5	18·91, 18·91	30278
2118	Pi 21h, 228	7·0	34 45·86	+ 2·4325	+ ·0073	+ 13	+38 58 44·4	+16·153	+ ·203	− 4	2, 2	20·58, 20·58	5557
2119	Gr. 3523	5·0	35 8·82	+ 1·9979	+ ·0060	− 23	+53 42 14·5	+16·173	+ ·165	0	5, 5	19·86, 19·86	30288
2120	Pi 21h, 241	7·2	35 10·68	+ 1·5905	− ·0022	+ 69	+61 57 49·3	+16·174	+ ·130	+126	2, 2	20·64, 20·64	5561
2121	BD + 24° 4445	6·5	21 35 22·31	+ 2·7025	+ ·0044	− 18	+25 9 35·6	+16·184	+ ·226	+ 4	5, 5	21·27, 21·27	30298
2122	Gr. 3524	6·8	35 47·10	+ 2·1534	+ ·0074	− 16	+49 27 23·9	+16·206	+ ·178	− 5	5, 6	19·30, 19·37	30306
2123	9 Ceph	4·9	35 54·51	+ 1·6106	− ·0015	+ 7	+61 44 36·1	+16·212	+ ·131	+ 2	3, 4	12·26, 12·10	5563
2124	Pi 21h, 248	6·2	36 37·93	+ 1·8610	+ ·0041	+ 5	+57 8 58·1	+16·249	+ ·152	+ 2	23, 22	13·98, 14·17	5565
2125	Pi 21h, 256	7·5	38 1·68	+ 1·8671	+ ·0043	− 54	+57 14 26·5	+16·320	+ ·150	− 19	3, 3	20·02, 20·02	5571
2126	Gr. 3544	6·2	21 38 14·15	+ 1·9852	+ ·0062	+ 6	+54 31 50·2	+16·331	+ ·161	− 2	5, 5	17·86, 17·86	30362
2127	Gr. 3550	6·5	38 19·58	+ 1·7627	+ ·0023	+ 82	+59 24 38·5	+16·335	+ ·142	+ 27	5, 5	19·72, 19·72	30363
2128	Pi 21h, 253	6·2	38 51·14	+ 2·5289	+ ·0071	+ 4	+35 10 3·9	+16·362	+ ·206	− 1	5, 6	20·52, 20·71	30384
2129	BD + 45° 3637	6·8	39 66·20	+ 2·2915	+ ·0082	+ 3	+45 25 24·4	+16·383	+ ·186	− 13	5, 5	20·12, 20·12	30390
2130	π^1 Cygn	4·8	39 25·83	+ 2·1281	+ ·0077	+ 6	+50 50 48·1	+16·391	+ ·172	− 1	4, 4	13·02, 13·02	5580
2131	Gr. 3556	6·2	21 39 54·87	+ 2·1826	+ ·0081	+ 7	+49 15 25·7	+16·415	+ ·176	− 3	5, 5	15·90, 15·90	30407
2132	BD + 49° 3597	7·4	40 3·38	+ 2·1654	+ ·0080	+ 5	+49 49 25·4	+16·422	+ ·174	+ 32	6, 7	21·01, 20·83	Gr² 9339
2133	Br. 2841	5·6	40 5·43	+ 2·4113	+ ·0081	− 19	+40 48 41·7	+16·425	+ ·194	− 14	1, 1	20·57, 20·57	5583
2134	79 Cygn	5·8	40 19·48	+ 2·4765	+ ·0077	+ 32	+37 56 22·9	+16·436	+ ·200	0	2, 4	11·76, 11·74	5585
2135	Gr. 3561	6·0	40 29·90	+ 1·8048	+ ·0034	− 7	+58 55 37·6	+16·445	+ ·143	+ 11	5, 5	21·11, 21·11	30418
2136	ε Pegs F	2·4	21 40 30·128	+ 2·9445	− ·0004	+ 17*	+ 9 31 49·88	+16·445	+ ·238	− 1*	21, 46	17·47, 16·76	5584
2137	11 Ceph	4·9	40 49·40	+ 0·8626	− ·0345	+240	+70 57 57·4	+16·461	+ ·065	+ 98	4, 4	14·50, 14·50	5594
2138	μ Ceph	4·5	41 12·68	+ 1·8346	+ ·0041	− 1	+58 26 8·5	+16·480	+ ·145	− 2	4, 4	16·22, 16·22	5593
2139	κ Pegs. (m)	4·2	41 14·85	+ 2·7133	+ ·0048	+ 24	+25 17 58·2	+16·482	+ ·218	+ 2	4, 2	13·47, 15·23	5592
2140	Br. 2851	6·8	42 32·42	+ 2·7172	+ ·0049	+ 10	+25 14 13·8	+16·546	+ ·217	+ 1	8, 8	20·27, 20·27	5598
2141	BD + 35° 4626	6·4	21 42 33·56	+ 2·5344	+ ·0074	+ 76	+35 30 38·9	+16·547	+ ·202	+ 6	4, 4	15·50, 15·50	30475
2142	Gr. 3564	6·2	42 33·87	+ 2·1102	+ ·0080	+ 13	+51 55 17·4	+16·547	+ ·166	0	7, 5	15·14, 15·69	30471
2143	12 Pegs	5·6	42 37·23	+ 2·7589	+ ·0041	+ 5	+22 36 8·7	+16·550	+ ·219	− 14	2, 4	19·14, 19·45	5599
2144	BD + 61° 2193	6·0	42 49·56	+ 1·6498	− ·0002	− 13	+62 6 52·6	+16·560	+ ·128	+ 1	5, 5	17·30, 17·30	30473
2145	δ Capri F	2·8	42 54·227	+ 3·2952	− ·0126	+179*	−16 28 5·34	+16·564	+ ·264	−295*	9, 11	19·83, 20·27	5600
2146	Br. 2852	6·6	21 42 58·88	+ 2·7186	+ ·0050	+108	+25 12 55·0	+16·568	+ ·215	+ 13	3, 3	19·98, 19·98	5602
2147	ν Ceph S	4·5	43 17·053	+ 1·7310	+ ·0020	− 3*	+60 46 27·40	+16·583	+ ·135	0*	12, 12	18·28, 18·28	5608
2148	π^2 Cygn S	4·4	44 1·211	+ 2·2145	+ ·0087	+ 4*	+48 57 43·32	+16·619	+ ·173	− 3*	17, 19	15·42, 15·03	5609
2149	Pi 21h, 298	6·7	44 58·65	+ 2·5287	+ ·0078	− 25	+36 13 54·6	+16·666	+ ·198	+ 2	5, 6	15·54, 14·90	30527
2150	Gr. 3571	7·4	45 12·05	+ 2·4808	+ ·0083	− 4	+38 36 26·2	+16·676	+ ·194	− 6	3, 3	19·68, 19·68	5612

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			h m s	s	s		° ′ ″	″	″				
2151	BD + 37° 4427	5·8	21 45 22·35	+ 2·4879	+ ·0083	+ 17	+38 17 57·9	+16·685	+ ·194	− 2	4, 4	12·18, 12·18	30537
2152	BD + 19° 4793	6·7	45 56·53	+ 2·8026	+ ·0035	− 10	+20 6 45·7	+16·712	+ ·218	0	5, 6	20·61, 20·33	30555
2153	14 Pegs	5·3	46 31·52	+ 2·6515	+ ·0064	+ 20	+29 49 27·3	+16·740	+ ·206	− 27	3, 3	20·38, 20·38	5617
2154	Gr. 3591	6·8	47 23·90	+ 1·3968	− ·0086	− 30	+66 26 36·1	+16·782	+ ·103	− 71	4, 4	12·74, 12·76	5620
2155	Gr. 3584	6·5	47 58·72	+ 2·4794	+ ·0087	+ 3	+39 11 5·3	+16·810	+ ·190	+ 6	5, 5	14·33, 14·33	30593
2156	Pi 21h, 312	5·9	21 48 2·81	+ 2·8155	+ ·0034	+ 24	+19 28 27·7	+16·813	+ ·216	+ 14	3, 3	19·04, 19·04	5621
2157	Gr. 3592	7·0	49 5·05	+ 2·2681	+ ·0096	− 17	+48 5 3·4	+16·862	+ ·172	+ 12	5, 5	18·31, 18·31	30617
2158	15 Pegs	5·8	49 8·96	+ 2·6817	+ ·0063	− 45	+28 26 31·1	+16·865	+ ·204	− 74	3, 3	12·70, 12·70	5625
2159	μ Capr. F	5·3	49 12·556	+ 3·2515	− ·0111	+211*	−13 54 19·47	+16·868	+ ·249	+ 9*	27, 36	20·33, 20·49	5623
2160	Gr. 3598	6·9	49 28·03	+ 2·0267	+ ·0081	+ 49	+55 26 20·2	+16·880	+ ·153	+ 17	1, 1	14·61, 14·61	5628
2161	Br. 2866	6·1	21 49 28·62	+ 2·0266	+ ·0081	+ 18	+55 26 38·1	+16·881	+ ·152	− 1	9, 9	14·37, 14·37	5629
2162	16 Pegs. S	5·1	49 38·912	+ 2·7284	+ ·0054	+ 1*	+25 34 18·05	+16·889	+ ·207	+ 1*	12, 13	15·56, 15·88	5627
2163	Gr. 3608	6·4	49 44·76	+ 1·4964	− ·0048	− 13	+65 24 0·6	+16·894	+ ·111	− 11	4, 4	15·29, 15·29	30629
2164	Br. 2868	7·1	50 35·24	+ 2·0183	+ ·0081	+ 32	+55 51 30·8	+16·933	+ ·150	+ 7	2, 2	20·14, 20·14	5632
2165	Br. 2867	6·9	50 41·94	+ 2·1020	+ ·0090	− 15	+53 38 36·3	+16·938	+ ·156	− 13	2, 2	20·59, 20·59	5633
2166	BD + 19° 4814	7·2	21 50 45·84	+ 2·8218	+ ·0035	− 27	+19 21 49·5	+16·941	+ ·213	− 7	5, 5	18·90, 18·90	30663
2167	79 Drac	6·9	51 54·68	+ 0·7039	− ·0489	+108	+73 20 50·5	+16·995	+ ·047	+ 29	8, 7	13·50, 13·97	5640
2168	Br. 2871	7·1	52 19·46	+ 2·1152	+ ·0094	+169	+53 34 40·5	+17·014	+ ·157	+ 81	4, 4	20·16, 20·16	5638
2169	13 Ceph	6·1	52 21·82	+ 2·1055	+ ·0083	− 9	+56 15 19·6	+17·016	+ ·148	− 4	4, 4	12·50, 12·50	5639
2170	Pi 21h, 339	6·5	52 53·52	+ 2·8043	+ ·0042	− 2	+20 52 58·2	+17·040	+ ·208	+ 17	5, 7	18·92, 19·69	30710
2171	Gr. 3617	6·0	21 52 54·01	+ 2·1427	+ ·0097	+ 6	+52 53 12·7	+17·040	+ ·157	+ 5	5, 5	19·13, 19·13	30701
2172	Gr. 3621	6·4	53 5·84	+ 1·7954	+ ·0044	+ 3	+61 11 8·2	+17·050	+ ·130	+ 9	5, 5	19·12, 19·12	30702
2173	BD + 64° 1607	6·0	53 32·00	+ 1·5731	− ·0020	+ 16	+64 57 51·0	+17·070	+ ·113	+ 3	3, 5	13·08, 12·52	5642
2174	Pi 21h, 360	5·4	54 32·21	+ 1·6917	+ ·0018	− 14	+63 16 5·0	+17·115	+ ·121	+ 8	5, 5	12·15, 12·55	5650
2175	Gr. 3637	6·3	55 16·10	+ 1·5334	− ·0034	+ 6	+65 47 53·5	+17·149	+ ·108	+ 4	13, 14	17·65, 18·08	30745
2176	Gr. 3639	6·8	21 55 28·96	+ 1·5370	− ·0032	+ 10	+65 46 50·4	+17·158	+ ·109	+ 18	6, 7	20·00, 19·80	30749
2177	Gr. 3644	6·5	56 40·76	+ 1·7663	+ ·0040	+ 3	+62 20 17·3	+17·212	+ ·125	+ 29	7, 10	17·42, 17·72	30774
2178	Br. 2897	6·6	57 8·74	+ 0·5887	− ·0604	− 15	+74 38 15·4	+17·233	+ ·037	− 6	11, 12	17·99, 17·93	30772
2179	20 Pegs	5·8	57 26·06	+ 2·9186	+ ·0015	+ 36	+12 45 35·8	+17·246	+ ·209	− 56	3, 7	12·07, 12·40	5658
2180	16 Ceph	5·2	58 11·25	+ 0·8817	− ·0384	−150	+72 49 24·1	+17·279	+ ·058	−160	11, 14	13·11, 12·85	5661
2181	Gr. 3654	6·8	21 58 24·50	+ 1·7944	+ ·0049	− 5	+62 7 35·9	+17·289	+ ·125	+ 10	5, 5	18·54, 18·54	30812
2182	Pi 21h, 383	5·9	59 5·53	+ 2·1954	+ ·0110	− 2	+52 31 12·6	+17·319	+ ·154	+ 3	7, 8	16·84, 17·31	5664
2183	14 Ceph	5·6	59 33·17	+ 2·0148	+ ·0094	− 8	+57 38 17·3	+17·340	+ ·139	− 4	3, 3	13·39, 13·39	5667
2184	Gr. 3655	5·7	59 54·91	+ 2·4207	+ ·0111	− 10	+44 17 16·0	+17·355	+ ·169	− 37	4, 4	12·68, 12·68	5669
2185	BD + 32° 4329	7·0	22 1 15·49	+ 2·6499	+ ·0085	− 9	+32 34 39·6	+17·414	+ ·184	+ 1	5, 5	17·08, 17·08	30879
2186	18 Ceph	5·5	22 1 38·00	+ 1·7913	+ ·0052	+ 44	+62 45 17·7	+17·430	+ ·122	+ 43	3, 3	19·70, 19·70	5678
2187	α Aqar. F	2·9	1 55·961	+ 3·0809	− ·0040	+ 9*	− 0 41 5·15	+17·443	+ ·214	− 6*	28, 62	18·39, 17·95	5676
2188	Gr. 3672	6·3	2 17·62	+ 2·3839	+ ·0117	− 43	+46 22 48·7	+17·459	+ ·163	− 20	4, 4	18·89, 18·89	30898
2189	23 Pegs	5·7	2 10·66	+ 2·7145	+ ·0073	+ 24	+28 35 57·0	+17·454	+ ·187	− 17	2, 2	18·69, 18·69	5681
2190	20 Ceph	5·5	2 43·67	+1·8201	+ ·0060	+ 16	+62 25 8·8	+17·477	+ ·122	+ 64	3, 4	11·73, 11·74	5685
2191	Gr. 3680	6·4	22 2 54·56	+ 2·3506	+ ·0119	− 8	+47 51 57·5	+17·485	+ ·160	+ 4	5, 5	18·91, 18·91	30917
2192	Pi 21h, 405	5·4	2 59·55	+ 2·4278	+ ·0116	− 1	+44 38 56·6	+17·489	+ ·166	− 17	3, 3	14·71, 41·71	5686
2193	Gr. 3681	6·5	3 9·94	+ 2·4234	+ ·0116	+ 31	+44 52 59·0	+17·496	+ ·165	− 10	5, 5	18·92, 18·92	30924
2194	ι Pegs. S	3·9	3 31·078	+ 2·7698	+ ·0062	+220*	+24 58 41·17	+17·511	+ ·189	+ 18*	17, 17	20·77, 20·88	5688
2195	Gr. 3690	5·4	4 38·79	+ 2·2193	+ ·0120	− 10	+52 56 25·6	+17·559	+ ·149	− 8	6, 6	15·92, 15·75	30958
2196	BD + 24° 4540	5·6	22 4 49·43	+ 2·7702	+ ·0064	− 30	+25 10 36·7	+17·566	+ ·187	− 36	6, 7	19·52, 19·55	30968
2197	BD + 49° 3746	6·8	5 21·68	+ 2·3343	+ ·0124	+ 28	+49 25 45·6	+17·589	+ ·155	− 23	6, 6	17·68, 16·36	30979
2198	BD + 45° 3813	7·3	5 38·99	+ 2·4250	+ ·0120	− 28	+45 22 24·0	+17·601	+ ·162	+ 31	5, 4	15·73, 16·74	30985
2199	27 Pegs	5·8	5 54·16	+ 2·6615	+ ·0090	− 45	+32 48 19·4	+17·611	+ ·178	− 72	11, 10	15·82, 15·34	5701
2200	θ Pegs. F	3·7	6 24·988	+ 3·0079	− ·0010	+184*	+ 5 49 41·91	+17·633	+ ·201	+ 34*	28, 53	17·98, 17·56	5703

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			h m s	s	s		° ′ ″	″	″				
2201	π Pegs.....S	4·3	22 6 39·256	+ 2·6639	+ ·0091	− 10*	+32 48 34·41	+17·643	+ ·177	− 23*	11, 12	16·63, 16·22	5709
2202	28 Pegs.....	6·5	6 57·44	+ 2·8348	+ ·0049	− 21	+20 36 31·8	+17·655	+ ·188	− 13	2, 2	20·18, 20·18	5710
2203	Pi 22h, 10.....	6·5	7 28·36	+ 2·7063	+ ·0083	+ 3	+30 11 1·5	+17·677	+ ·178	− 9	6, 6	19·04, 19·04	31034
2204	Gr. 3703.....	5·5	8 14·66	+ 2·3145	+ ·0131	+148	+50 27 8·4	+17·709	+ ·151	+ 32	4, 5	14·22, 13·12	5713
2205	ζ Ceph.....S	3·6	8 14·955	+ 2·0774	+ ·0117	+ 13*	+57 49 52·61	+17·709	+ ·134	+ 7*	10, 11	19·81, 20·01	5714
2206	24 Ceph.....S	5·0	22 8 22·098	+ 1·1511	− ·0231	+ 61*	+71 58 18·31	+17·714	+ ·071	+ 4*	26, 21	17·49, 17·08	5716
2207	BD + 24° 4548.....	6·5	8 38·81	+ 2·7874	+ ·0065	− 6	+24 34 47·6	+17·725	+ ·182	− 20	6, 6	20·88, 20·88	31064
2208	λ Ceph.....	5·3	8 57·72	+ 2·0352	+ ·0113	+ 29	+59 2 39·1	+17·738	+ ·131	− 6	2, 2	20·15, 20·15	5719
2209	Br. 2926.....	5·5	9 5·74	+ 2·1347	+ ·0125	+288	+56 27 56·1	+17·743	+ ·137	+128	4, 4	12·96, 12·96	5721
2210	Gr. 3715.....	6·6	9 21·26	+ 2·0518	+ ·0115	+164	+58 42 42·6	+17·754	+ ·131	+ 84	5, 5	19·51, 19·51	31076
2211	Pi 22h, 29.....	5·6	22 9 28·55	+ 2·6510	+ ·0099	+ 16	+34 14 3·8	+17·759	+ ·171	− 43	5, 5	16·78, 16·78	5724
2212	Pi 22h, 42.....	6·1	10 2·17	+ 1·8665	+ ·0082	− 11	+62 55 12·7	+17·781	+ ·118	− 7	6, 2	14·89, 15·53	31086
2213	Pi 22h, 32.....	6·2	10 12·37	+ 2·5699	+ ·0115	+ 42	+28 14 9·2	+17·806	+ ·164	+ 5	3, 3	20·64, 20·64	5732
2214	Gr. 3737.....	5·8	10 43·87	+ 2·4581	+ ·0127	+ 82	+45 4 5	+17·809	+ ·156	− 7	3, 0	12·75,	5734
2215	Br. 2938.....	6·4	11 28·02	+ 1·8875	+ ·0089	− 41	+62 47 24·3	+17·838	+ ·117	+ 2	3, 1	14·70, 20·63	5738
2216	ε Ceph.....	4·2	22 12 15·69	+ 2·1523	+ ·0132	+546	+56 40 9·0	+17·872	+ ·134	+ 45	2, 0	14·78,	5742
2217	1 Lacr.....	4·3	12 41·91	+ 2·6122	+ ·0111	+ 17	+37 22 29·7	+17·887	+ ·164	− 4	2, 1	15·74, 19·74	5746
2218	θ Aqar.....F	4·4	12 52·653	+ 3·1591	− ·0074	+ 74*	− 8 9 26·22	+17·895	+ ·200	− 19*	32, 56	19·97, 18·46	5744
2219	Pi 22h, 50.....	6·6	13 2·43	+ 2·7608	+ ·0078	− 9	+27 25 47·3	+17·901	+ ·174	+ 4	5, 7	18·91, 19·32	31151
2220	Pi 22h, 61.....	6·1	13 43·90	+ 2·1579	+ ·0135	+ 55	+56 50 44·0	+17·929	+ ·134	− 3	3, 1	15·05, 17·73	5751
2221	Pi 22h, 65.....	6·4	22 15 38·66	+ 2·6237	+ ·0114	+ 58	+37 23 31·0	+18·002	+ ·160	+ 61	4, 2	17·00, 20·24	5754
2222	25 Ceph.....	6·2	15 45·63	+ 1·9486	+ ·0110	+ 65	+62 25 40·9	+18·007	+ ·117	+ 23	1, 1	13·64, 13·64	5756
2223	Pi 22h, 80.....	6·5	17 20·84	+ 2·1971	+ ·0147	+ 4	+56 32 25·9	+18·067	+ ·131	+ 10	5, 6	21·27, 21·02	31235
2224	BD + 50° 3673.....	6·5	17 41·27	+ 2·3703	+ ·0149	+ 11	+50 36 10·9	+18·080	+ ·142	+ 5	6, 6	20·70, 20·70	31243
2225	γ Aqar.....F	3·9	17 46·957	+ 3·0906	− ·0040	+ 82*	− 1 45 57·13	+18·084	+ ·187	+ 9*	3, 7	17·04, 14·87	5761
2226	BD + 57° 2508.....	6·4	22 17 57·03	+ 2·1507	+ ·0145	− 46	+58 1 53·4	+18·090	+ ·127	+ 36	6, 6	21·39, 21·39	31249
2227	32H Ceph.....P	5·4	19 30·334	− 4·5283	−1·4299	+ 52*	+85 43 53·29	+18·149	− ·288	+ 50*	41, 31	20·26, 19·78	5784
2228	Gr. 3758.....	6·3	20 13·94	+ 2·2082	+ ·0154	+ 15	+56 54 13·2	+18·175	+ ·128	+ 2	5, 7	19·77, 18·76	31297
2229	BD + 61° 2291.....	6·2	20 28·84	+ 2·0137	+ ·0132	− 9	+62 2 21·7	+13·184	+ ·116	+ 43	4, 5	21·49, 21·11	31303
2203	BD + 37° 4560.....	6·3	20 34·84	+ 2·6310	+ ·0123	+215	+38 11 27·1	+18·188	+ ·154	+119	5, 5	21·30, 21·30	31315
2231	β Lacr.....S	4·6	22 20 36·415	+ 2·3578	+ ·0156	− 16*	+51 51 10·22	+18·189	+ ·137	−190*	11, 11	21·17, 21·17	5776
2232	4 Lacr.....	4·6	21 28·32	+ 2·4299	+ ·0154	− 8	+49 5 45·3	+18·221	+ ·140	− 11	2, 2	14·18, 14·18	5779
2233	BD + 70° 1240.....	5·8	24 4·35	+ 1·5485	− ·0017	+ 60	+70 23 19·0	+18·241	+ ·084	+ 18	4, 5	12·88, 14·25	5792
2234	BD + 39° 4841.....	6·1	24 9·05	+ 2·6266	+ ·0131	− 1	+39 25 38·9	+18·317	+ ·148	− 10	6, 6	20·99, 20·99	31375
2235	Pi 22h, 113.....	6·3	24 19·96	+ 2·7413	+ ·0103	+ 32	+31 27 22·7	+18·324	+ ·154	+ 34	7, 6	15·04, 14·92	31381
2236	Br. 2969.....	5·8	22 24 40·30	+ 1·9279	+ ·0123	+ 9	+64 44 58·6	+18·336	+ ·106	+ 9	4, 4	15·22, 15·22	5796
2237	Pi 22h, 120.....	6·0	25 39·20	+ 2·8075	+ ·0084	+ 18	+26 22 44·4	+18·370	+ ·156	− 18	4, 2	19·50, 18·26	5798
2238	BD + 63° 1852.....	6·1	25 49·53	+ 1·9926	+ ·0140	+ 32	+63 42 7·6	+18·376	+ ·108	− 10	5, 5	19·67, 19·67	31410
2239	δ Ceph.....S	4·0	26 22·925	+ 2·2222	+ ·0171	+ 15*	+58 1 51·58	+18·395	+ ·121	+ 3*	17, 18	17·10, 17·02	5807
2240	38 Pegs.....	5·6	26 35·79	+ 2·7394	+ ·0108	+ 25	+32 11 18·1	+18·403	+ ·150	− 16	6, 7	13·92, 13·62	5806
2241	σ Aqar.....F	4·9	22 26 40·763	+ 3·1763	− ·0086	0*	−11 3 43·60	+18·406	+ ·176	− 30*	12, 22	20·80, 20·80	5803
2242	BD + 48° 3747.....	6·9	27 1·22	+ 2·4668	+ ·0165	− 27	+48 58 20·6	+18·418	+ ·135	− 43	5, 6	12·69, 12·70	31442
2243	6 Lacr.....	4·5	27 14·85	+ 2·5866	+ ·0147	− 12	+42 44 19·1	+18·425	+ ·140	− 2	2, 3	13·74, 14·05	5810
2244	α Lacr.....S	3·8	28 11·873	+ 2·4541	+ ·0170	+145*	+49 53 47·63	+18·458	+ ·132	+ 13*	15, 11	14·80, 14·64	5813
2245	BD + 15° 4670.....	6·7	29 6·87	+ 2·9299	+ ·0042	+ 6	+15 28 34·6	+18·489	+ ·157	+ 9	4, 5	18·49, 18·72	31490
2246	Gr. 3804.....	6·0	22 29 7·22	+ 2·6490	+ ·0137	+ 15	+39 23 37·3	+18·489	+ ·141	− 9	3, 3	17·08, 17·08	5815
2247	Gr. 3807.....	6·7	29 19·90	+ 2·3730	+ ·0179	+ 37	+53 39 1·8	+18·496	+ ·125	+ 28	5, 6	17·76, 18·09	31489
2248	Pi 22h, 156.....	5·9	30 45·67	+ 2·3140	+ ·0185	+ 89	+56 14 10·9	+18·544	+ ·121	+ 45	1, 2	11·73, 12·26	5821
2249	Gr. 3823.....	6·4	31 11·39	+ 2·1469	+ ·0178	+ 23	+61 23 25·7	+18·558	+ ·110	+ 22	4, 4	19·45, 19·45	31519
2250	η Aqar.....F	4·1	31 30·169	+ 3·0772	− ·0029	+ 60*	− 0 30 16·12	+18·569	+ ·161	− 54*	28, 57	18·31, 17·75	5824

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			h m s	s	s		° ′ ″	″	″				
2251	Br. 2981	6·7	22 32 31·70	+ 2·6663	+ ·0142	− 6	+39 14 22·9	+18·602	+ ·136	− 11	3, 2	19·07, 17·76	5832
2252	8 Lacr.	5·9	32 31·89	+ 2·6662	+ ·0142	− 9	+39 14 44·9	+18·602	+ ·136	− 15	2, 3	20·74, 21·05	5833
2253	BD + 34° 4728	6·3	32 43·26	+ 2·7225	+ ·0126	− 4	+35 11 24·1	+18·609	+ ·140	− 67	5, 5	19·11, 19·11	31558
2254	BD + 11° 4838	7·2	33 22·34	+ 2·9663	+ ·0030	− 24	+12 11 17·6	+18·630	+ ·152	− 14	5, 5	20·05, 20·05	31570
2255	BD + 34° 4729	6·5	33 24·03	+ 2·7241	+ ·0127	− 2	+35 15 47·7	+18·631	+ ·138	0	5, 5	16·92, 16·92	31568
2256	31 Ceph.	5·3	22 33 54·52	+ 1·4437	− ·0075	+394	+73 15 13·3	+18·647	+ ·069	+ 22	9, 8	13·24, 12·74	5838
2257	Gr. 3857	6·1	35 36·61	+ 1·2797	− ·0191	+117	+74 58 53·8	+18·701	+ ·059	+ 10	11, 11	20·54, 20·54	31604
2258	Gr. 3847	5·4	35 40·60	+ 2·3492	+ ·0200	+ 61	+56 24 21·0	+18·703	+ ·116	− 22	4, 5	12·37, 12·25	5843
2259	40 Pegs. S	6·1	35 53·543	+ 2·6892	+ ·0144	0*	+38 39 34·55	+18·710	+ ·133	− 9*	18, 17	15·85, 16·22	5844
2260	30 Ceph.	5·3	35 59·15	+ 2·1249	+ ·0190	− 2	+63 11 39·7	+18·713	+ ·103	− 19	3, 2	14·78, 14·80	5848
2261	41 Pegs.	6·5	22 36 8·92	+ 2·9055	+ ·0064	+ 3	+19 17 23·3	+18·718	+ ·144	− 19	5, 4	19·70, 19·70	5847
2262	BD + 36° 4902	6·0	36 10·55	+ 2·7100	+ ·0138	+ 3	+37 12 6·6	+18·719	+ ·133	0	5, 5	19·12, 19·12	31632
2263	11 Lacr.	4·6	37 13·22	+ 2·6185	+ ·0166	+ 90	+43 53 3·7	+18·751	+ ·127	+ 9	2, 4	13·24, 12·76	5852
2264	Gr. 3854	6·0	37 15·07	+ 2·4359	+ ·0199	− 2	+53 27 16·9	+18·752	+ ·117	− 13	6, 6	19·70, 19·70	31650
2265	ζ Pegs. F	3·5	37 43·246	+ 2·9863	+ ·0025	+ 52*	+10 26 22·14	+18·767	+ ·145	− 12*	17, 36	18·74, 17·62	5853
2266	BD + 30° 4771	6·3	22 38 0·91	+ 2·7963	+ ·0113	+ 46	+30 34 24·7	+18·776	+ ·135	0	5, 5	20·52, 20·52	31668
2267	12 Lacr.	5·4	38 6·96	+ 2·6830	+ ·0152	− 17	+39 50 0·1	+18·778	+ ·128	− 7	2, 2	20·75, 20·75	5856
2268	o Pegs.	4·9	38 14·03	+ 2·8150	+ ·0106	− 5	+28 54 56·7	+18·782	+ ·135	− 35	2, 2	21·20, 21·20	5858
2269	Gr. 3858	6·3	38 14·68	+ 2·6649	+ ·0158	+128	+41 9 19·7	+18·783	+ ·128	+ 65	5, 6	21·31, 21·37	31672
2270	Gr. 3862	6·0	39 16·51	+ 2·4493	+ ·0204	− 2	+53 30 57·5	+18·814	+ ·115	+ 1	5, 5	17·90, 17·90	31690
2271	η Pegs. S	4·9	22 39 29·012	+ 2·8091	+ ·0111	+ 8*	+29 49 43·07	+18·820	+ ·133	− 35*	11, 11	16·57, 16·59	5865
2272	Gr. 3864	6·4	39 49·91	+ 2·5855	+ ·0183	+ 9	+46 46 31·7	+18·831	+ ·121	− 2	4, 4	14·88, 14·46	31709
2273	BD + 64° 1704	6·7	40 26·14	+ 2·1003	+ ·0202	+ 13	+64 56 34·3	+18·849	+ ·096	− 4	5, 4	20·23, 19·88	31719
2274	Gr. 3869	6·5	40 41·79	+ 2·7049	+ ·0152	− 6	+39 4 20·0	+18·857	+ ·125	− 14	3, 2	13·77, 14·80	5868
2275	13 Lacr.	5·3	40 44·56	+ 2·6732	+ ·0162	− 8	+41 25 31·3	+18·858	+ ·124	+ 6	13, 13	14·54, 14·54	5869
2276	Gr. 3877	6·9	22 41 41·27	+ 2·4971	+ ·0206	− 5	+52 7 21·9	+18·886	+ ·114	+ 13	5, 5	19·58, 19·61	31749
2277	Gr. 3882	6·0	42 50·20	+ 2·6442	+ ·0177	+131	+44 9 0·8	+18·919	+ ·118	+ 25	5, 6	13·28, 13·03	5876
2278	λ Pegs. S	4·0	42 54·990	+ 2·8840	+ ·0085	+ 42*	+23 10 14·15	+18·922	+ ·131	− 14*	13, 14	18·00, 17·84	5875
2279	Pi 22h, 226	6·0	44 44·75	+ 2·7477	+ ·0149	− 50	+37 1 18·7	+18·974	+ ·121	− 58	5, 5	19·93, 19·93	31824
2280	Gr. 3894	6·0	45 40·64	+ 2·4864	+ ·0223	− 23	+54 1 5·9	+19·000	+ ·107	+ 8	7, 6	15·43, 15·55	31831
2281	Gr. 3897	6·4	22 45 54·17	+ 2·2559	+ ·0238	+ 8	+62 32 34·4	+19·006	+ ·096	− 48	5, 6	15·96, 15·74	31834
2282	μ Pegs. S	3·7	46 22·867	+ 2·8831	+ ·0092	+107*	+24 12 18·98	+19·019	+ ·125	− 45*	12, 12	18·58, 19·72	5885
2283	Gr. 3900	5·6	46 40·17	+ 2·4611	+ ·0231	+ 99	+55 30 17·2	+19·028	+ ·106	+ 38	4, 6	12·48, 13·08	5887
2284	Gr. 3901	6·8	46 56·80	+ 2·5688	+ ·0211	+ 10	+50 16 46·1	+19·035	+ ·109	+ 4	6, 6	18·91, 18·91	31858
2285	14 Lacr.	6·1	46 58·53	+ 2·7017	+ ·0172	+ 9	+41 33 21·2	+19·036	+ ·115	− 1	3, 3	14·07, 14·07	5890
2286	ι Ceph. S	3·6	22 47 0·342	+ 2·1415	+ ·0232	−110*	+65 48 20·44	+19·037	+ ·090	−121*	9, 8	15·68, 15·70	5891
2287	Br. 3028	5·9	48 26·52	+ 2·3231	+ ·0251	+154	+61 17 50·8	+19·075	+ ·095	+ 42	2, 2	11·77, 11·77	5896
2288	15 Lacr.	5·1	48 38·69	+ 2·6922	+ ·0180	+ 95	+42 54 48·6	+19·081	+ ·113	+ 18	2, 3	13·18, 13·73	5897
2289	λ Aqar. F	3·8	48 42·181	+ 3·1301	− ·0061	+ 3*	− 7 58 44·52	+19·083	+ ·132	+ 36*	29, 49	19·42, 18·61	5895
2290	Gr. 3914	6·7	49 45·53	+ 2·7372	+ ·0168	− 3	+39 46 7·0	+19·111	+ ·112	− 9	4, 4	17·94, 17·94	31920
2291	BD + 67° 1475	6·9	22 50 3·00	+ 2·0990	+ ·0238	+139	+67 35 23·6	+19·118	+ ·084	+ 72	5, 6	20·49, 20·42	31921
2292	BD + 59° 2595	6·4	50 3·94	+ 2·3857	+ ·0254	+ 23	+59 42 6·6	+19·119	+ ·096	+ 10	4, 5	12·21, 12·32	31922
2293	Gr. 3918	5·9	50 18·52	+ 2·6816	+ ·0191	− 15	+44 20 59·4	+19·125	+ ·108	0	4, 5	16·68, 16·11	5903
2294	Gr. 3919	6·1	50 40·30	+ 2·7890	+ ·0170	+ 86	+39 58 35·8	+19·134	+ ·111	+ 36	4, 6	16·52, 15·94	31940
2295	BD + 36° 4956	6·0	51 33·11	+ 2·7800	+ ·0155	+ 72	+36 40 36·1	+19·157	+ ·111	+ 9	7, 7	19·48, 19·75	31964
2296	16 Lacr.	5·7	22 52 57·93	+ 2·7354	+ ·0179	− 5	+41 12 11·7	+19·193	+ ·107	− 6	8, 8	12·12, 12·12	5913
2297	BD + 84° 517	6·2	52 58·45	− 1·3053	− ·6009	+ 59	+84 58 19·0	+19·194	+ ·103	+112	12, 12	21·07, 21·07	31955
2298	Gr. 3930	5·1	53 8·40	+ 2·6255	+ ·0221	+ 2	+49 19 58·3	+19·198	+ ·102	− 12	6, 5	20·04, 20·11	5914
2299	Gr. 3933	5·2	53 45·40	+ 2·6456	+ ·0217	+ 16	+48 16 58·9	+19·214	+ ·102	− 15	5, 4	14·54, 13·52	5918
2300	Pi 22h, 261	6·1	54 12·64	+ 2·7675	+ ·0170	− 7	+38 54 27·1	+19·224	+ ·106	+ 2	5, 7	20·33, 20·44	32010

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			h m s	s	s		° ′ ″	″	″				
2301	52 Pegs	6·0	22 55 26·62	+ 2·9984	+ ·0039	+ 17	+11 19 40·1	+19·255	+ ·113	− 41	4, 4	19·22, 19·22	5922
2302	Gr. 3940	6·4	22 55 55·17	+ 2·5965	+ ·0242	− 37	+52 15 6·0	+19·266	+ ·096	+ 28	7, 6	12·16, 12·23	32039
2303	Pi 22h, 276	7·4	22 55 56·92	+ 2·6027	+ ·0240	+ 14	+51 54 3·3	+19·267	+ ·097	− 9	6, 7	20·44, 20·45	32041
2304	Gr. 3945	6·6	22 56 4·39	+ 2·4503	+ ·0278	+ 3	+59 24 49·4	+19·270	+ ·090	+ 7	5, 5	18·99, 18·99	32042
2305	BD + 56° 2923	5·4	22 56 55·19	+ 2·5232	+ ·0266	+ 4	+56 32 34·7	+19·290	+ ·092	+ 8	3, 4	12·46, 13·04	5931
2306	Br. 3044	6·5	22 58 20·05	+ 2·5318	+ ·0272	− 6	+56 42 8·7	+19·324	+ ·090	− 5	4, 8	15·90, 14·46	32091
2307	o Andr. S	3·7	22 58 27·929	+ 2·7544	+ ·0192	+ 21*	+41 55 21·82	+19·327	+ ·098	− 21*	17, 15	14·56, 14·74	5933
2308	Gr. 3957	6·3	22 58 45·84	+ 2·7300	+ ·0204	+ 13	+44 10 11·2	+19·333	+ ·097	− 15	5, 7	20·17, 20·81	32100
2309	2 Andr.	5·2	22 59 8·92	+ 2·7532	+ ·0197	+ 55	+42 21 15·1	+19·342	+ ·097	− 7	3, 3	16·75, 16·75	5936
2310	Gr. 3968	6·8	22 59 38·58	+ 2·3919	+ ·0303	+ 39	+62 56 13·6	+19·354	+ ·082	+ 9	6, 6	20·88, 20·88	32119
2311	β Pegs. S	Var.	23 0 8·136	+ 2·8919	+ ·0120	+144*	+27 40 32·19	+19·365	+ ·101	+133*	11, 11	16·11, 16·11	5940
2312	BD + 57° 2676	5·7	23 0 11·20	+ 2·5174	+ ·0285	+ 82	+58 9 36·5	+19·366	+ ·086	+ 19	5, 5	20·93, 20·93	32130
2313	3 Andr.	4·8	23 0 48·46	+ 2·6712	+ ·0239	+169	+49 38 36·9	+19·380	+ ·090	+161	5, 4	13·50, 13·97	5942
2314	α Pegs. F	2·6	23 1 1·402	+ 2·9829	+ ·0059	+ 40*	+14 48 4·81	+19·385	+ ·102	− 45*	26, 46	18·28, 17·58	5944
2315	Gr. 3977	6·9	23 1 30·61	+ 2·4155	+ ·0312	+ 8	+62 50 6·7	+19·396	+ ·081	+ 44	6, 6	20·83, 20·83	32152
2316	Pi 22h, 300	6·3	23 2 34·33	+ 2·9644	+ ·0076	+160	+18 6 40·3	+19·419	+ ·099	+ 57	5, 5	21·29, 21·29	32178
2317	Gr. 3982	7·0	23 3 5·54	+ 2·4335	+ ·0319	+ 15	+62 48 27·7	+19·430	+ ·079	+ 11	6, 6	21·17, 21·17	32185
2318	55 Pegs.	4·8	23 3 13·49	+ 3·0209	+ ·0032	+ 5	+ 9 0 15·3	+19·433	+ ·100	− 14	2, 2	12·70, 12·70	5952
2319	1 Cass.	4·9	23 3 26·24	+ 2·5291	+ ·0302	+ 13	+59 0 51·1	+19·438	+ ·082	+ 6	4, 6	12·78, 12·96	5955
2320	BD + 20° 5278	5·9	23 3 46·56	+ 2·9500	+ ·0091	+ 79	+20 43 45·8	+19·445	+ ·096	− 52	5, 5	20·91, 20·91	32209
2321	Gr. 3986	5·8	23 3 50·39	+ 2·6516	+ ·0263	+ 11	+52 24 38·2	+19·446	+ ·086	+ 7	4, 4	14·71, 14·71	32205
2322	4 Andr.	5·6	23 4 13·23	+ 2·7395	+ ·0224	− 5	+45 58 55·4	+19·454	+ ·088	− 30	5, 4	12·93, 13·23	5957
2323	5 Andr.	6·0	23 4 20·58	+ 2·7046	+ ·0242	+150	+48 53 11·7	+19·457	+ ·087	+126	4, 4	14·99, 14·99	5958
2324	Gr. 3993	6·6	23 4 43·66	+ 2·4401	+ ·0329	+ 1	+63 13 38·8	+19·465	+ ·077	− 0	6, 6	20·72, 20·72	32228
2325	Gr. 3994	6·8	23 4 54·14	+ 2·4257	+ ·0333	+ 11	+63 48 59·5	+19·468	+ ·076	+ 3	6, 5	20·04, 19·92	32232
2326	η Ceph. S	4·6	23 5 30·397	+ 1·8996	+ ·0250	+ 30*	+74 58 54·92	+19·481	+ ·057	− 25*	25, 26	17·02, 16·60	5966
2327	2 Cass.	5·8	23 5 31·24	+ 2·5600	+ ·0312	− 5	+58 55 33·3	+19·502	+ ·078	+ 14	4, 3	15·24, 15·42	5969
2328	BD + 64° 1764	6·6	23 6 14·28	+ 2·4126	+ ·0344	+ 51	+64 48 16·8	+19·496	+ ·073	0	5, 5	20·15, 20·15	32263
2329	6 Andr.	6·1	23 6 59·20	+ 2·7856	+ ·0212	−183	+43 8 30·4	+19·511	+ ·085	−188	6, 4	12·89, 12·92	5972
2330	59 Pegs.	5·3	23 7 56·92	+ 3·0288	+ ·0032	− 11	+ 8 18 44·7	+19·530	+ ·091	− 6	1, 1	12·63, 12·63	5973
2331	7 Andr.	4·6	23 9 6·37	+ 2·7343	+ ·0252	+ 95	+48 59 45·1	+19·552	+ ·080	+ 96	6, 4	12·22, 12·22	5975
2332	Br. 3077 S	5·7	23 9 39·803	+ 2·6287	+ ·0309	+2531*	+56 45 15·03	+19·563	+ ·075	+297*	10, 13	14·72, 14·28	5976
2333	Pi 23h, 20	6·6	23 10 15·97	+ 2·9725	+ ·0087	+ 14	+19 13 32·4	+19·575	+ ·085	− 3	5, 4	20·13, 20·24	32344
2334	φ Aqar. F	4·4	23 10 26·332	+ 3·1052	− ·0042	+ 18*	− 6 27 12·90	+19·578	+ ·089	−191*	35, 50	19·44, 18·97	5978
2335	BD + 23° 4704	6·4	23 10 54·39	+ 2·9481	+ ·0110	+ 80	+23 41 38·8	+19·587	+ ·083	+ 8	5, 5	20·74, 20·96	32355
2336	BD + 23° 4712	6·6	23 12 15·88	+ 2·9477	+ ·0114	+ 65	+24 21 42·1	+19·612	+ ·080	+ 6	5, 5	20·14, 20·14	32380
2337	Br. 3086	5·7	23 12 43·62	+ 2·3009	+ ·0407	+ 24	+70 28 44·0	+19·620	+ ·061	+ 12	2, 2	11·82, 11·82	5987
2338	γ Pisc. F	3·8	23 13 16·617	+ 3·0592	+ ·0007	+502*	+ 2 52 20·06	+19·630	+ ·082	+ 19*	39, 65	18·59, 18·08	5988
2339	Br. 3084	5·8	23 13 16·65	+ 2·7162	+ ·0291	+128	+52 48 34·9	+19·629	+ ·072	−244	4, 6	11·96, 12·24	5989
2340	Gr. 4025	6·8	23 13 44·68	+ 2·8073	+ ·0235	+ 97	+44 45 20·8	+19·638	+ ·074	− 74	3, 5	21·29, 20·91	5990
2341	Gr. 4033	6·4	23 14 39·86	+ 2·0999	+ ·0395	+ 56	+74 53 21·4	+19·654	+ ·052	+ 6	10, 10	19·49, 19·49	32436
2342	o Ceph.	5·1	23 15 32·22	+ 2·4446	+ ·0419	+112	+67 42 3·1	+19·669	+ ·060	+ 17	2, 4	11·77, 12·53	6000
2343	BD + 34° 4899	6·4	23 15 49·47	+ 2·8977	+ ·0173	+ 11	+34 22 57·8	+19·674	+ ·073	− 4	5, 5	20·13, 20·13	32473
2344	11 Andr.	5·5	23 15 59·79	+ 2·7874	+ ·0262	+ 17	+48 12 49·1	+19·677	+ ·069	+ 57	5, 5	15·56, 15·33	6001
2345	10 Andr.	6·0	23 16 17·91	+ 2·8474	+ ·0219	+ 38	+41 40 2·9	+19·682	+ ·070	+ 8	3, 4	14·83, 14·62	6003
2346	τ Pegs. S	4·6	23 16 55·312	+ 2·9652	+ ·0113	+ 20*	+23 19 46·56	+19·692	+ ·072	− 21*	11, 13	16·67, 16·69	6005
2347	Br. 3101	6·0	23 16 57·30	+ 2·6121	+ ·0376	+ 3	+61 33 34·6	+19·692	+ ·063	− 9	5, 5	20·16, 20·16	32499
2348	Gr. 4043	6·6	23 17 1·49	+ 2·6436	+ ·0360	+ 4	+59 51 50·5	+19·693	+ ·064	− 6	6, 6	21·03, 21·03	32501
2349	63 Pegs.	6·0	23 17 8·88	+ 2·9293	+ ·0150	+ 59	+30 0 20·7	+19·695	+ ·072	− 67	3, 4	12·01, 11·97	6006
2350	B.A.C. 8135	6·5	23 17 10·78	+ 2·8355	+ ·0233	− 18	+43 42 22·0	+19·696	+ ·068	− 26	6, 6	20·44, 20·44	32506

No.	STAR	M	1925·0 R.A.	1925·0 Prec.	1925·0 Sec. Var.	P.M. s ·0000	1925·0 Dec.	1925·0 Prec.	1925·0 Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
2351	12 Andr.	6·0	23 17 15·74	+ 2·8808	+ ·0195	+ 97	+37 46 22·2	+19·697	+ ·070	− 78	4, 4	20·07, 20·07	6008
2352	Br. 3104	6·3	23 17 17·54	+ 2·6109	+ ·0380	+ 3	+61 48 9·2	+19·698	+ ·062	− 1	4, 5	20·73, 20·53	32508
2353	64 Pegs.	5·6	23 18 15·00	+ 2·9250	+ ·0158	+ 7	+31 24 5·5	+19·714	+ ·069	− 21	5, 4	15·10, 15·26	6009
2354	BD + 25° 4927	6·6	23 18 46·25	+ 2·9587	+ ·0126	+ 5	+25 30 26·1	+19·721	+ ·069	− 21	3, 3	21·00, 21·00	32530
2355	65 Pegs.	6·5	23 18 56·37	+ 2·9842	+ ·0100	+ 7	+20 25 3·6	+19·724	+ ·070	− 14	3, 3	20·36, 20·36	6011
2356	Br. 3110	5·8	23 19 11·34	+ 2·6674	+ ·0368	+ 1	+59 43 19·0	+19·728	+ ·060	− 3	5, 5	12·21, 12·21	6016
2357	Br. 3112	7·1	23 20 42·88	+ 2·7202	+ ·0350	+ 35	+57 7 25·4	+19·751	+ ·059	+ 1	3, 3	20·63, 20·63	6021
2358	67 Pegs.	5·7	23 21 10·34	+ 2·9322	+ ·0164	+ 4	+31 58 21·4	+19·758	+ ·064	− 1	4, 11	12·44, 13·12	6023
2359	4 Cass. S	5·2	23 21 29·823	+ 2·6549	+ ·0400	+ 17*	+61 52 15·56	+19·763	+ ·056	− 8*	15, 18	17·30, 17·22	6025
2360	ν Pegs. S	4·6	23 21 38·018	+ 2·9784	+ ·0115	+137*	+22 59 27·81	+19·764	+ ·064	+ 28*	13, 13	19·66, 19·67	6024
2361	κ Pisc. F	5·0	23 23 5·245	+ 3·0696	+ ·0002	+ 57*	+ 0 50 41·47	+19·785	+ ·063	− 90*	20, 34	19·17, 18·16	6031
2362	13 Andr.	5·8	23 23 30·10	+ 2·8786	+ ·0235	+ 80	+42 29 56·8	+19·791	+ ·058	+ 14	1, 2	11·72, 11·72	6034
2363	69 Pegs.	6·2	23 23 56·65	+ 2·9763	+ ·0127	+ 18	+24 45 18·5	+19·797	+ ·060	− 47	4, 4	21·18, 21·18	6036
2364	Gr. 4070	7·0	23 23 59·41	+ 2·6200	+ ·0451	− 12	+65 12 35·1	+19·798	+ ·051	− 69	5, 5	20·93, 20·93	32636
2365	Br. 3131	6·9	23 25 0·49	+ 2·3454	+ ·0576	− 37	+74 48 43·7	+19·825	+ ·042	− 15	4, 5	20·76, 20·80	6044
2366	BD + 48° 4070	6·5	23 26 32·45	+ 2·8514	+ ·0289	+ 31	+48 43 10·4	+19·832	+ ·052	− 3	4, 4	19·76, 19·76	32684
2367	Pi 23h, 101	5·0	23 26 33·64	+ 2·7603	+ ·0380	+ 31	+58 8 7·2	+19·832	+ ·050	+ 13	1, 1	11·84, 11·84	6046
2368	BD + 37° 4856	6·1	23 26 59·59	+ 2·9216	+ ·0211	+ 32	+38 14 53·5	+19·837	+ ·053	+ 12	6, 7	20·56, 20·58	32692
2369	39H Ceph. P	5·9	23 27 43·366	− 0·3833	− ·6791	+ 99*	+86 53 37·89	+19·846	− ·016	+ 18*	174, 125	17·90, 16·77	6056
2370	BD + 23° 4759	7·2	23 28 44·10	+ 2·9940	+ ·0123	+ 1	+23 25 47·9	+19·858	+ ·051	− 19	5, 4	21·14, 21·00	32740
2371	Gr. 4088	6·6	23 28 48·50	+ 2·6780	+ ·0481	+ 94	+65 19 29·8	+19·859	+ ·045	+ 17	5, 5	21·36, 21·36	32737
2372	BD + 44° 4441	6·3	23 30 4·63	+ 2·9009	+ ·0262	− 31	+44 38 36·1	+19·874	+ ·047	+ 11	5, 5	17·15, 17·15	32766
2373	BD + 20° 5352	6·4	23 30 9·60	+ 3·0082	+ ·0108	− 6	+20 25 36·6	+19·875	+ ·048	− 21	5, 5	21·15, 21·15	32771
2374	72 Pegs. (M)	5·2	23 30 13·65	+ 2·9692	+ ·0168	+ 40	+30 54 41·4	+19·876	+ ·048	− 12	1, 1	14·75, 14·75	6059
2375	73 Pegs.	5·9	23 30 55·48	+ 2·9626	+ ·0182	− 1	+33 4 56·3	+19·884	+ ·046	+ 29	4, 4	20·51, 20·51	6061
2376	BD + 37° 4866	6·6	23 31 5·26	+ 2·9388	+ ·0211	+ 2	+37 36 32·6	+19·886	+ ·048	+ 10	5, 5	19·56, 19·56	32784
2377	BD + 23° 4767	6·7	23 31 14·60	+ 2·9983	+ ·0128	− 46	+24 0 40·9	+19·887	+ ·046	− 4	5, 6	21·35, 21·29	32789
2378	Br. 3140	6·1	23 31 43·03	+ 2·5888	+ ·0602	+ 13	+71 13 38·6	+19·892	+ ·038	+ 5	11, 12	18·89, 19·05	32793
2379	BD + 23° 4769	6·6	23 32 10·51	+ 3·0003	+ ·0130	+ 13	+24 8 45·0	+19·897	+ ·044	+ 14	5, 5	20·95, 20·95	32814
2380	Gr. 4105	6·5	23 33 51·69	+ 2·9259	+ ·0264	+ 9	+44 0 51·2	+19·914	+ ·040	− 9	5, 5	15·72, 16·33	32831
2381	λ Andr. S	3·8	23 33 53·221	+ 2·9152	+ ·0281	+149*	+46 3 6·08	+19·915	+ ·040	+421*	10, 11	16·75, 15·94	6071
2382	ι Andr. S	4·3	23 34 27·102	+ 2·9349	+ ·0255	+ 22*	+42 51 9·60	+19·920	+ ·039	− 3*	8, 9	18·51, 18·30	6073
2383	18 Andr.	5·4	23 35 29·84	+ 2·9025	+ ·0321	− 13	+50 3 23·4	+19·930	+ ·037	− 9	2, 2	14·63, 14·66	6075
2384	Gr. 4119	6·0	23 35 56·29	+ 2·5545	+ ·0735	+ 34	+74 52 37·6	+19·934	+ ·030	+ 14	10, 10	20·89, 20·89	32869
2385	Pi 23h, 152	6·1	23 36 4·32	+ 2·6000	+ ·0705	− 17	+73 35 13·2	+19·935	+ ·031	+ 11	10, 10	20·32, 20·32	32876
2386	ι Pisc. F	4·2	23 36 5·501	+ 3·0601	+ ·0032	+248*	+ 5 13 10·91	+19·936	+ ·038	−439*	25, 45	18·40, 18·13	6077
2387	γ Ceph. S	3·4	23 36 15·160	+ 2·4638	+ ·0798	−181*	+77 12 49·41	+19·937	+ ·029	+158*	22, 23	20·23, 20·33	6078
2388	κ Andr.	4·3	23 36 42·39	+ 2·9423	+ ·0268	+ 73	+43 55 7·	+19·941	+ ·035	− 24	2, 0	11·78,	6080
2389	BD + 35° 5074	6·4	23 36 55·37	+ 2·9741	+ ·0210	+191	+36 18 16·3	+19·943	+ ·035	+ 26	5, 5	20·93, 20·93	32892
2390	Gr. 4125	6·4	23 37 46·68	+ 2·9235	+ ·0316	− 3	+49 5 48·6	+19·951	+ ·033	− 20	6, 6	18·53, 18·53	32909
2391	BD + 56° 3067	6·5	23 38 17·41	+ 2·8794	+ ·0405	+ 4	+56 50 39·3	+19·955	+ ·031	+ 1	4, 5	14·78, 14·16	32916
2392	Gr. 4128	6·7	23 38 32·72	+ 2·9496	+ ·0276	− 13	+44 34 34·3	+19·957	+ ·032	− 19	4, 4	15·48, 15·48	6086
2393	Gr. 4130	6·9	23 38 47·91	+ 2·8187	+ ·0519	+ 2	+64 5 58·3	+19·959	+ ·030	+ 3	5, 5	19·58, 19·58	32927
2394	BD + 60° 2609	6·5	23 38 55·90	+ 2·8491	+ ·0471	+ 72	+61 15 49·4	+19·960	+ ·029	− 6	5, 6	20·90, 20·71	32930
2395	Br. 3160	5·1	23 40 12·79	+ 3·0091	+ ·0166	+ 54	+28 56 46·0	+19·969	+ ·028	− 36	4, 5	12·28, 12·17	6094
2396	Pi 23h, 175	6·7	23 41 8·44	+ 2·9137	+ ·0395	+ 30	+55 23 0·0	+19·977	+ ·027	− 13	6, 6	20·30, 20·30	6097
2397	ψ Andr.	5·1	23 42 18·65	+ 2·9661	+ ·0296	+ 12	+46 0 13·9	+19·985	+ ·025	− 18	5, 6	12·70, 12·53	6101
2398	19 Pisc.	5·6	23 42 33·49	+ 3·0674	+ ·0025	− 34	+ 3 4 14·2	+19·987	+ ·025	− 20	1, 1	12·77, 12·77	6102
2399	BD + 65° 1943	5·9	23 43 1·39	+ 2·8467	+ ·0590	+ 7	+66 21 57·4	+19·990	+ ·022	+ 5	6, 6	15·44, 15·44	33004
2400	BD + 56° 3085	5·7	23 43 21·36	+ 2·9233	+ ·0424	+ 17	+57 2 6·1	+19·992	+ ·022	− 15	1, 3	14·72, 15·13	6105

No.	STAR	M	1925·0 R.A.	Prec.	Sec. Var.	P.M. s ·0000	1925·0 Dec.	Prec.	Sec. Var.	P.M. ″ ·000	No. Obs.	Epoch 1900 +	Boss
			h m s	s	s		° ′ ″	″	″				
2401	τ Cass.	5·0	23 43 22·82	+ 2·9165	+ ·0442	+ 84	+58 14 2·4	+19·992	+ ·023	+ 56	4, 4	13·03, 13·03	6106
2402	Gr. 4139	6·8	43 49·11	+ 2·9737	+ ·0303	+ 8	+46 24 57·4	+19·995	+ ·022	− 2	7, 7	17·46, 17·48	33021
2403	41H Ceph. S	5·1	44 18·809	+ 2·8533	+ ·0624	+ 19*	+67 23 24·12	+19·998	+ ·020	+ 2*	10, 13	14·86, 14·99	6108
2404	Gr. 4144	6·4	45 0·49	+ 2·8899	+ ·0560	+ 18	+64 27 36·4	+20·002	+ ·019	− 15	6, 7	19·16, 19·41	33045
2405	Br. 3168	6·4	45 12·61	+ 2·9260	+ ·0470	+ 63	+59 33 42·9	+20·003	+ ·019	+ 11	6, 6	20·14, 20·14	33052
2406	Br. 3170	6·7	23 45 30·17	+ 2·9347	+ ·0455	+ 69	+58 32 47·8	+20·005	+ ·019	− 19	3, 3	14·69, 14·69	6112
2407	79 Pegs.	6·2	45 51·09	+ 3·0282	+ ·0167	+ 54	+28 25 29·5	+20·007	+ ·019	+ 19	1, 1	12·79, 12·79	6114
2408	BD + 35° 5110	5·9	45 54·34	+ 3·0131	+ ·0219	+ 7	+36 0 34·5	+20·007	+ ·018	− 50	5, 5	14·57, 14·57	33063
2409	Pi 23h, 204	6·8	46 36·90	+ 2·9758	+ ·0357	+130	+51 12 18·1	+20·010	+ ·017	− 18	3, 3	20·45, 20·45	6117
2410	Br. 3175	6·4	48 34·77	+ 3·0469	+ ·0126	− 36	+21 15 14·3	+20·020	+ ·014	− 22	3, 3	20·45, 20·45	6125
2411	φ Pegs. F	5·5	23 48 40·137	+ 3·0504	+ ·0112	− 11*	+18 42 13·56	+20·020	+ ·013	− 44*	31, 50	20·73, 20·31	6127
2412	25 Pisc.	6·5	49 14·21	+ 3·0710	+ ·0021	+ 8	+ 1 40 24·4	+20·023	+ ·012	− 6	2, 2	12·67, 12·67	6133
2413	Gr. 4156	6·6	49 20·96	+ 2·9640	+ ·0499	+ 10	+60 17 14·7	+20·023	+ ·012	+ 3	5, 5	20·51, 20·51	33138
2414	ρ Cass.	4·9	50 37·65	+ 2·9884	+ ·0449	− 6	+57 4 56·1	+20·028	+ ·009	+ 5	14, 17	13·90, 13·46	6135
2415	Gr. 4163	6·9	51 9·60	+ 2·8932	+ ·0933	− 28	+73 59 34·6	+20·030	+ ·008	− 7	8, 8	14·78, 14·78	6138
2416	Pi 23h, 231	7·0	23 51 45·17	+ 3·0106	+ ·0385	+ 72	+52 19 3·9	+20·032	+ ·008	+ 27	4, 4	20·29, 20·29	6141
2417	Gr. 4165	6·1	51 46·01	+ 3·0214	+ ·0323	− 6	+46 56 19·5	+20·032	+ ·007	− 4	4, 4	12·81, 13·56	33183
2418	Br. 3184	6·2	51 47·63	+ 2·9991	+ ·0451	− 6	+56 59 41·7	+20·032	+ ·008	− 3	3, 3	13·43, 13·43	6142
2419	Pi 23h, 235	6·1	52 52·05	+ 3·0558	+ ·0135	− 16	+22 13 50·8	+20·035	+ ·005	− 7	11, 10	19·81, 19·71	33208
2420	Gr. 4172	6·3	53 14·95	+ 3·0370	+ ·0279	− 3	+42 14 27·6	+20·037	+ ·003	− 12	4, 6	19·06, 17·62	6154
2421	Br. 3185	5·6	23 53 21·20	+ 3·0169	+ ·0430	− 13	+55 17 19·0	+20·037	+ ·005	− 16	4, 7	12·76, 12·76	6148
2422	ψ Pegs.	4·8	53 56·05	+ 3·0565	+ ·0151	− 31	+24 43 28·8	+20·038	+ ·003	− 37	4, 4	13·26, 13·02	6150
2423	27 Pisc.	5·2	54 49·99	+ 3·0749	− ·0005	− 38	− 3 58 19·4	+20·040	+ ·002	− 67	1, 1	12·83, 12·83	6153
2424	σ Cass.	5·1	55 11·82	+ 3·0323	+ ·0436	+ 13	+55 20 14·8	+20·040	+ ·001	− 5	3, 4	12·70, 12·49	6155
2425	ω Pisc. F	4·1	55 27·517	+ 3·0698	+ ·0050	+101*	+ 6 26 53·27	+20·041	+ ·000	−109*	26, 47	19·80, 19·10	6156
2426	Gr. 4192	6·5	23 56 11·28	+ 3·0551	+ ·0251	0	+38 26 31·0	+20·042	− ·001	+ 6	5, 5	18·94, 19·37	33282
2427	Br. 3192	6·7	56 33·44	+ 3·0628	+ ·0165	+ 35	+26 30 5·7	+20·043	− ·002	− 43	4, 3	16·01, 17·41	6162
2428	BD + 58° 2685	6·5	56 42·29	+ 3·0408	+ ·0506	− 98	+59 8 33·3	+20·043	− ·002	− 21	4, 5	20·98, 20·93	33294
2429	Gr. 4194	6·1	56 53·43	+ 3·0547	+ ·0310	+ 22	+44 50 9·3	+20·043	− ·002	+ 6	5, 5	20·57, 20·57	33298
2430	BD + 49° 4309	6·3	57 28·91	+ 3·0556	+ ·0364	+ 9	+49 33 51·1	+20·044	− ·004	− 10	8, 7	21·15, 20·92	33311
2431	Gr. 4199	6·4	23 57 53·38	+ 3·0618	+ ·0284	− 5	+41 56 58·7	+20·044	− ·004	− 12	3, 7	12·12, 12·78	6168
2432	85 Pegs.	6·0	58 14·24	+ 3·0676	+ ·0167	+623	+26 41 17·9	+20·044	− ·005	−986	4, 4	14·26, 13·99	6172
2433	Br. 3202	6·1	58 44·69	+ 3·0566	+ ·0672	+ 27	+65 40 53·2	+20·045	− ·006	− 5	2, 3	14·78, 15·16	6176
2434	Gr. 4207	7·0	59 17·09	+ 3·0690	+ ·0290	+ 35	+42 19 49·7	+20·045	− ·007	− 2	5, 5	20·38, 20·38	11
2435	BD + 62° 2356	6·6	59 33·89	+ 3·0678	+ ·0609	− 13	+63 13 22·9	+20·045	− ·008	+ 61	5, 6	20·73, 20·41	17
2436	Gr. 4214	6·6	23 59 59·06	+ 3·0726	+ ·0699	+ 35	+66 17 41·4	+20·045	− ·009	− 4	5, 5	20·75, 20·75	24

CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

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Observations of the Sun, Mercury, and Venus

Catalogue of 1589 Stars

Corrections to G.C. and FK3

BY

W. S. McClenahan

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1952

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ABSTRACT

These positions are the results from observations taken at Ottawa during the years 1923 to 1935. The program comprised observations on the sun, planets, and daylight stars, as well as night observing. Star observations, taken usually before dusk and after dawn, provided corrections to reduce sun and planet observations to a night basis. These results were then solved for corrections to the equinox, the equator, and the orbital elements.

The catalogue of 1589 stars comprises 180 clock stars, 21 azimuth stars, and stars between − 30° and + 90° declination selected from the Backlund-Hough list, given in the supplement to the Connaissance des Temps of 1914. Eichelberger's positions were used for the clock stars, whereas the positions of the azimuth stars were determined from Ottawa observations, using Eichelberger's proper motions. Positions were finally reduced to 1925·0 without proper motion.

The declinations were computed from nadir readings, using 45° 23′ 39″.0 as a provisional latitude of the meridian circle.

Corrections were applied for horizontal flexure, variation of latitude, as given in the International Latitude Variation Publications, and refraction based on Bessel's Tabulae Regiomontanae. A solution of pole stars at upper and lower culmination gave a corrected value of latitude 45° 23′ 38″.89. Screens were used to reduce star magnitudes, and a reversing prism was used with the eye-piece throughout the work.

Comparisons with the G.C. and FK3 are given for 3-hour intervals, as well as the observed corrections to G.C. and FK3 for the epoch of observation. Equinox and equator corrections were deduced but were not applied to the observations.

INTRODUCTION

This part of the volume contains the results of observations made at Ottawa during the period from November 1923 to May 1935. The program included:

(1) Observations on the sun, Mercury, Venus, 180 clock stars, and 21 azimuth stars.

(2) Observations on stars selected from a list of "Fundamental Stars" contained in the supplement to the Connaissance des Temps for 1914.

The Ottawa list was to include the Backlund-Hough stars not included in Auwers' and Newcomb's lists, and all the Boss fundamental list. Only stars between − 30° and + 90° declination were selected. The completed list contains 1,589 stars.

It was intended to take at least two observations on each star in each clamp and then interchange the object glass and eye-end. The first part of the program was completed early in 1935. The object glass and eye-end were then interchanged and the second series of observations started. Due to retirements and the assignment of observers to other duties, the second half of the observations was not completed in the same manner as the first; also Eichelberger's positions were replaced by the FK3 positions and a discontinuity in the right ascensions was thereby introduced. No observations were taken on the sun and planets after 1937. As the results of the observations, 1923 to 1935, would be of immediate use (1949) in a project undertaken by the Naval Observatory, Washington, U.S.A., it was decided to complete and publish them. The later observations, 1935 to 1949, can be completed as a separate project and, with some adjustments, the right ascensions can all be based on the FK3 positions of the 180 clock stars.

97808—1½

It should be noted that no special list of stars for daylight observing was introduced. The plan was to observe enough clock stars to determine a clock correction before and after sunset and sunrise. From these clock corrections the day to night difference in Table XXIII was obtained and applied to the observations of the sun and planets. Similarly, from the day-night differences of the same stars in declination, a solution was made for a correction to the sun and planet declinations. (*See* sun declinations.)

The work was initiated by R. M. Stewart and carried out under the immediate supervision of C. C. Smith, who also took a major part in the observations. The other observers were R. J. McDiarmid, A. H. Swinburn, and W. S. McClenahan. D. B. Nugent assisted at times in setting the microscopes and recording for the sun observations, and did a large part of the right ascension computations. E. C. Arbogast took a major part in the declination computations, and besides the observers, Miss K. C. Nevins, W. C. Jacques, and A. W. Grant took part in the computing.

A description of the instrument and the method of finding the instrumental constants will be found in Volume XV, No. 1 of these publications.

With this program, screens were used to reduce the magnitudes of the brighter stars to between the fifth and sixth magnitude. Three screens of fixed density were provided, and one of these was attached to the end of the dew cap when necessary.

A canvas screen was used to shield the instrument when observing the sun. This was raised from a mounting on the south collimator pier. Two observers were on duty for the sun observations, which were taken daily except Sunday.

A reversing prism was used throughout the observations, and the transits, taken with a travelling wire micrometer, were recorded on a printing chronograph. Type wheels mounted on the head of the zenith distance micrometer, permitted the printing of these records for each pointing made.

Although most of the computing was done by the older members of the staff, the final results have been hastened considerably by having student help in the summer months of 1947, 1948, and 1949, and by the work of Mr. E. G. Woolsey, who joined the staff in 1946, and Mr. R. W. Tanner, who was appointed to the Division of Position Astronomy in 1949. Woolsey assisted in preparing part of the manuscript and Tanner was particularly helpful in verifying the formulæ used in the solution made of the sun and planet observations.

The Naval Observatory, Washington, D.C., U.S.A., supplied the Boss General Catalogue positions of practically all the stars on our list, also the FK3 positions, as well as the precessions and secular variations for 1925. This help was very valuable and saved a great deal of work in completing the catalogue. The writers wish to thank the Superintendent of the Naval Observatory for this very fine contribution. Finally, acknowledgment is made of the help and encouragement received from Dr. H. R. Morgan, C. B. Watts, F. P. Scott, and A. N. Adams, also of the U.S. Naval Observatory.

The observations on each star after being reduced to 1925 and assembled, were again examined and the larger differences checked. This along with a complete checking of most of the computations should free the results from any serious errors. Any differences greater than $0^{s}.1$ Sec. δ in right ascension and two seconds of arc in declination were re-examined before discarding. This rule was not rigorously adhered to in the case of fainter stars observed far from the zenith. Seeing conditions generally in this part of the sky were poor and larger differences were expected.

An examination of the residuals of the first star in each half hour of right ascension taken in two bands of declination $-5°$ to $+5°$ and $+40°$ to $+50°$, gave the following probable errors:

$-5°$ to $+5°$ R.A. $\pm 0^{s}.024$ or $\pm 0''.36$; Dec. $\pm 0''.38$
$+40°$ to $+50°$ R.A. $\pm 0^{s}.026$ or $\pm 0''.28$; Dec. $\pm 0''.36$

Right Ascensions

The mean places of the clock stars were computed from Eichelberger's positions and proper motions of 1,504 standard stars, Astronomical Papers of the American Ephemeris, Vol. X, Part 1. The azimuth star positions were taken from the previous positions determined at Ottawa and brought forward, using Eichelberger's proper motions. The right ascensions for the day required were computed except for six stars from the American Ephemeris and the Connaissance des Temps, and corrected by the difference between the mean place for Eichelberger and the mean place of the Ephemeris. The other six stars were taken from other ephemerides and corrected in a similar manner. Results for right ascension were retained:

(*a*) For clock stars, if at least six clock stars and two azimuth stars, one at upper and one at lower culmination, were distributed over a period of at least 3 hours.

(*b*) For azimuth stars, if at least six clock stars and four azimuth stars, two at upper and two at lower culmination, or two azimuth stars, one at upper and one at lower and a reading on both the azimuth marks;

(*c*) For program stars, at least six clock stars and one azimuth star.

Table I is a list of the clock stars used.

TABLE I—CLOCK STARS

No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Ottawa -Eichelberger	No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Ottawa -Eichelberger
			° ′	h m s	s				° ′	h m s	s
F 1	γ Pegs.	2·9	+14 46·0	0 9 22·247	+0·019	F 34	ε Tauri.	3·6	+19 0·9	24 14·009	− ·003
F 2	ι Ceti.	3·8	− 9 14·4	15 36·408	+ ·021	F 35	α Tauri.	1·1	+16 21·6	31 36·833	− ·008
F 3	13 Ceti.	5·2	− 4 0·3	31 23·179	− ·013	F 36	μ Erid.	4·2	− 3 23·5	41 45·017	+ ·007
F 4	δ Pisc.	4·6	+ 7 10·6	44 47·303	− ·015	F 37	π^5 Orio.	3·9	+ 2 19·1	50 20·539	− ·002
F 5	20 Ceti.	4·9	− 1 33·1	49 10·433	+ ·036	F 38	β Erid.	2·9	− 5 10·9	5 4 9·650	− ·001
F 6	ε Pisc.	4·4	+ 7 29·2	59 2·877	+ ·009	F 39	β Orio.	0·3	− 8 17·2	10 55·919	− ·005
F 7	η Ceti.	3·6	−10 34·8	1 4 48·976	− ·012	F 40	τ Orio.	3·7	− 6 55·4	13 57·780	− ·009
F 8	89 Pisc.	5·3	+ 3 13·2	13 55·675	+ ·003	F 41	γ Orio.	1·7	+ 6 17·0	21 6·401	+ ·011
F 9	θ Ceti.	3·8	− 8 34·2	20 16·408	− ·015	F 42	δ Orio.	2·5	− 0 21·2	28 10·391	− ·010
F 10	η Pisc.	3·7	+14 57·6	27 27·963	− ·004	F 43	ε Orio.	1·8	− 1 15·0	32 24·385	+ ·011
F 11	ν Pisc.	4·7	+ 5 6·5	37 31·542	+ ·025	F 44	κ Orio.	2·2	− 9 41·7	44 11·884	− ·020
F 12	ο Pisc.	4·5	+ 8 46·9	41 25·799	+ ·003	F 45	α Orio.	0·5-1·1	+ 7 23·7	51 6·608	− ·005
F 13	ζ Ceti.	3·9	−10 42·3	47 45·432	+ ·004	F 46	ν Orio.	4·4	+14 46·7	6 3 17·297	+ ·000
F 14	ξ Pisc.	4·8	+ 2 49·1	49 40·209	+ ·002	F 47	5 Mono.	4·1	− 6 15·0	11 11·776	+ ·015
F 15	β Arie.	2·7	+20 26·5	50 29·532	+ ·007	F 48	8 Mono.	4·5	+ 4 37·9	19 47·576	+ ·034
F 16	ξ^1 Ceti.	4·5	+ 8 29·7	2 9 1·291	+ ·018	F 49	10 Mono.	5·0	− 4 42·9	24 15·281	+ ·013
F 17	θ Arie.	5·7	+19 33·3	13 56·920	− ·003	F 50	γ Gemi.	1·9	+16 27·9	33 22·729	+ ·007
F 18	ξ^2 Ceti.	4·3	+ 8 7·5	24 10·074	+ ·004	F 51	ξ Gemi.	3·4	+12 58·7	41 4·765	+ ·003
F 19	δ Ceti.	4·0	+ 0 0·4	35 38·133	− ·002	F 52	θ C. Maj.	4·2	−11 56·6	50 42·247	− ·018
F 20	μ Ceti.	4·4	+ 9 48·0	40 53·046	+ ·000	F 53	ζ Gemi.	3·7-4·1	+20 40·9	59 39·645	+ ·001
F 21	η Erid.	4·0	− 9 11·7	52 45·691	+ ·000	F 54	γ C. Maj.	4·1	−15 31·3	7 0 21·809	− ·049
F 22	α Ceti.	2·8	+ 3 47·8	58 21·386	+ ·019	F 55	22 Mono.	4·1	− 0 22·0	8 2·008	− ·005
F 23	δ Arie.	4·5	+19 26·6	3 7 20·118	− ·022	F 56	λ Gemi.	3·6	+16 40·6	13 46·966	− ·012
F 24	ο Tauri.	3·8	+ 8 46·0	20 46·432	+ ·006	F 57	β C. Min.	3·1	+ 8 26·5	23 4·996	− ·001
F 25	5 Tauri.	4·3	+12 40·8	26 43·698	− ·015	F 58	6 C. Maj.	4·8	+12 9·8	25 37·317	+ ·015
F 26	ε Erid.	3·8	− 9 42·7	29 23·713	+ ·007	F 59	25 Mono.	5·2	− 3 56·5	33 32·912	+ ·015
F 27	δ Erid.	3·7	−10 1·0	39 39·178	− ·039	F 60	α C. Min.	0·5	+ 5 25·1	35 22·591	+ ·026
F 28	γ Erid.	3·2	−13 43·3	54 31·693	− ·020	F 61	9 Pupp.	5·3	−13 41·9	48 17·858	+ ·014
F 29	λ Tauri.	3·8-4·2	+12 16·8	56 31·306	+ ·010	F 62	8 Canc.	5·1	+13 20·0	8 0 53·856	− ·009
F 30	ν Tauri.	3·9	+ 5 46·9	59 9·810	− ·008	F 63	β Canc.	3·8	+ 9 25·1	12 26·910	+ ·002
F 31	o^1 Erid.	4·1	− 7 1·9	4 8 12·140	+ ·002	F 64	30 Mono.	4·0	− 3 39·6	21 54·759	− ·006
F 32	γ Tauri.	3·9	+15 26·9	15 31·292	+ ·001	F 65	β Hyda.	4·2	+ 5 58·0	33 41·159	− ·010
F 33	δ Tauri.	3·9	+17 22·1	18 36·341	− ·015	F 66	δ Canc.	4·2	+18 25·9	40 25·469	− ·008

TABLE I—CLOCK STARS—*Concluded*

No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Ottawa -Eichelberger	No.	Name	Mag.	Dec.	Right Ascension 1925·0 Ottawa Ledgers	Ottawa -Eichelberger
			° ′	h m s	s				° ′	h m s	s
F 67	ζ Hyda	3·3	+ 6 13·9	51 25·795	+ ·006	F 124	ζ Ophi	2·7	−10 25·0	33 1.566	− ·007
F 68	α Canc	4·3	+12 8·9	54 23·179	− ·002	F 125	κ Ophi	3·4	+ 9 29·4	54 6·993	+ ·017
F 69	κ Canc	5·1	+10 58·3	9 3 41·153	− ·002	F 126	η Ophi	2·6	−15 38·0	17 6 4·456	− ·011
F 70	θ Hyda	3·8	+ 2 37·9	10 27·772	+ ·004	F 127	σ Ophi	4·4	+ 4 12·3	22 47·492	+ ·014
F 71	α Hyda	2·2	− 8 20·0	23 54·067	− ·024	F 128	α Ophi	2·1	+12 36·8	31 27·084	+ ·006
F 72	ι Hyda	4·1	− 0 48·1	36 1·538	+ ·008	F 129	β Ophi	2·9	+ 4 35·8	39 45·953	+ ·002
F 73	ο Leon	3·8	+10 14·1	37 8·925	− ·008	F 130	γ Ophi	3·7	+ 2 44·1	44 7·825	+ ·007
F 74	π Leon	4·9	+ 8 24·3	56 15·056	+ ·002	F 131	ν Ophi	3·5	− 9 45·9	54 53·765	− ·019
F 75	η Leon	3·6	+17 7·6	10 3 14·732	+ ·022	F 132	67 Ophi	4·0	+ 2 56·0	56 53·240	+ ·007
F 76	α Leon	1·3	+12 20·1	4 22·743	− ·006	F 133	72 Ophi	3·7	+ 9 33·1	18 3 47·550	− ·014
F 77	λ Hyda	3·8	−11 59·0	6 55·823	− ·013	F 134	η Serp	3·4	− 2 55·2	17 25·677	+ ·003
F 78	22 Sext	5·4	− 7 41·6	13 54·127	− ·012	F 135	γ Scut	4·7	−14 36·9	24 55·324	+ ·006
F 79	μ Hyda	4·1	−16 27·2	22 27·655	− ·030	F 136	1 Aqil	4·1	− 8 17·9	31 7·494	− ·016
F 80	ρ Leon	3·8	+ 9 41·6	28 51·778	+ ·004	F 137	2 Aqil	4·7	− 9 7·5	38 9·993	+ ·000
F 81	53 Leon	5·3	+10 56·6	45 18·936	+ ·000	F 138	6 Aqil	4·5	− 4 49·8	43 11·672	+ ·010
F 82	58 Leon	5·0	+ 4 1·2	56 41·230	+ ·000	F 139	θ Serp. pr	4·5	+ 4 6·3	52 29·419	+ ·008
F 83	χ Leon	4·7	+ 7 44·5	11 1 8·924	+ ·011	F 140	ε Aqil	4·2	+14 57·9	56 13·052	+ ·015
F 84	θ Leon	3·4	+15 50·4	10 18·335	+ ·003	F 141	λ Aqil	3·6	− 4 59·8	19 2 16·099	+ ·003
F 85	δ Crat	3·8	−14 22·4	15 35·326	+ ·000	F 142	ω Aqil	5·1	+11 27·5	14 17·713	+ ·016
F 86	σ Leon	4·1	+ 6 26·4	17 16·155	+ ·011	F 143	δ Aqil	3·4	+ 2 57·8	21 42·985	− ·003
F 87	υ Leon	4·5	− 0 24·6	33 6·465	+ ·003	F 144	κ Aqil	5·0	− 7 11·7	32 51·386	− ·008
F 88	β Leon	2·2	+14 59·5	45 14·073	− ·012	F 145	γ Aqil	2·8	+10 25·8	42 41·605	− ·004
F 89	β Virg	3·8	+ 2 11·2	46 47·262	+ ·000	F 146	δ Sgte	3·8	+18 20·9	44 2·543	− ·011
F 90	π Virg	4·6	+ 7 2·0	57 1·753	+ ·000	F 147	α Aqil	0·9	+ 8 40·2	47 7·423	+ ·007
F 91	ο Virg	4·2	+ 9 9·0	12 1 23·300	− ·002	F 148	β Aqil	3·9	+ 6 13·1	51 37·717	− ·003
F 92	η Virg	4·0	− 0 15·0	16 4·036	+ ·002	F 149	γ Sgte	3·7	+19 17·3	55 25·240	+ ·001
F 93	δ Corv	3·1	−16 5·9	25 58·785	− ·013	F 150	θ Aqil	3·4	− 1 2·7	20 7 26·117	− ·004
F 94	24 Coma Seq	5·2	+18 47·4	31 22·063	+ ·012	F 151	α² Capr	3·8	−12 46·7	13 53·655	− ·016
F 95	χ Virg	4·8	− 7 35·0	35 22·355	+ ·005	F 152	β Capr	3·2	−15 1·2	16 47·934	− ·009
F 96	δ Virg	3·7	+ 3 48·3	51 49·429	− ·011	F 153	ε Dlph	4·0	+11 2·8	29 37·744	− ·006
F 97	ε Virg	3·0	+11 21·7	58 26·574	+ ·026	F 154	β Dlph	3·7	+14 20·0	34 1·883	+ ·009
F 98	θ Virg	4·5	− 5 8·3	13 6 3·833	− ·002	F 155	α Dlph	3·9	+15 38·8	36 9·201	− ·013
F 99	σ Virg	5·0	+ 5 51·9	13 48·940	− ·022	F 156	ε Aqar	3·8	− 9 46·3	43 37·026	− ·001
F 100	α Virg	1·2	−10 46·2	21 14·318	+ ·003	F 157	μ Aqar	4·8	− 9 15·9	— — ———	—
F 101	ζ Virg	3·4	− 0 12·8	30 52·150	+ ·000	F 158	ν Aqar	4·5	−11 40·6	21 5 30·586	− ·020
F 102	τ Boot	4·5	+17 49·8	43 41·815	− ·017	F 159	α Equl	4·1	+ 4 56·2	12 4·475	− ·003
F 103	η Boot	2·8	+18 46·4	51 6·743	− ·003	F 160	1 Pegs	4·3	+19 29·0	18 36·984	− ·003
F 104	τ Virg	4·3	+ 1 54·4	57 49·621	− ·006	F 161	β Aqar	3·1	− 5 54·1	27 36·744	+ ·050
F 105	κ Virg	4·3	− 9 55·5	14 8 53·461	− ·009	F 162	ξ Aqar	4·8	− 8 11·5	33 45·612	− ·003
F 106	α Boot	0·2	+19 34·3	12 14·353	+ ·005	F 163	ε Pegs	2·5	+ 9 31·8	40 30·112	+ ·016
F 107	λ Virg	4·6	−13 1·6	15 2·841	− ·003	F 164	δ Capr	3·0	−16 28·1	42 54·193	− ·012
F 108	φ Virg	5·0	− 1 53·6	24 20·100	+ ·000	F 165	μ Capr	5·2	−13 54·3	49 12·519	− ·019
F 109	μ Virg	4·0	− 5 20·0	39 6·267	+ ·008	F 166	α Aqar	3·2	− 0 41·1	22 1 55·926	+ ·001
F 110	109 Virg	3·8	+ 2 12·5	42 27·270	+ ·005	F 167	θ Pegs	3·7	+ 5 49·7	6 24·966	+ ·012
F 111	α² Libr	2·9	−15 43·9	46 43·485	− ·023	F 168	θ Aqar	4·3	− 8 9·4	12 52·626	+ ·007
F 112	δ Libr	4·8-6·2	− 8 13·3	56 57·709	+ ·010	F 169	γ Aqar	4·0	− 1 45·9	17 46·967	+ ·003
F 113	β Libr	2·7	− 9 6·4	15 12 58·038	− ·008	F 170	σ Aqar	4·9	−11 3·7	26 40·744	− ·015
F 114	γ Libr	4·0	−14 32·4	31 18·588	− ·009	F 171	η Aqar	4·1	− 0 30·3	31 30·135	− ·007
F 115	α Serp	2·8	+ 6 39·6	40 34·311	+ ·030	F 172	ζ Pegs	3·6	+10 26·4	37 43·208	+ ·008
F 116	β Serp	3·7	+15 39·3	42 43·442	+ ·008	F 173	λ Aqar	3·8	− 7 58·7	48 42·134	+ ·001
F 117	μ Serp	3·6	− 3 12·1	45 42·185	− ·013	F 174	α Pegs	2·6	+14 48·1	23 1 1·360	− ·002
F 118	ε Serp	3·8	+ 4 42·1	47 4·485	− ·014	F 175	φ Aqar	4·4	− 6 27·2	10 26·320	+ ·015
F 119	γ Serp	3·9	+15 54·3	52 59·174	− ·013	F 176	γ Pisc	3·8	+ 2 52·3	13 16·596	+ ·006
F 120	δ Ophi	3·0	− 3 30·1	16 10 24·754	+ ·005	F 177	κ Pisc	4·9	+ 0 50·7	23 5·214	+ ·004
F 121	ε Ophi	3·3	− 4 30·6	14 21·003	− ·007	F 178	ι Pisc	4·3	+ 5 13·2	36 5·483	+ ·011
F 122	γ Herc	3·8	+19 19·7	18 36·576	+ ·008	F 179	φ Pegs	5·2	+18 42·2	48 40·133	− ·015
F 123	β Herc	2·8	+21 39·1	26 59·631	+ ·001	F 180	ω Pisc	4·0	+ 6 26·9	55 27·496	+ ·010

TABLE II—Δ α (OTTAWA—EICHELBERGER)

R.A.	Δ α	R.A.	Δ α	R.A.	Δ α
h h	s	h h	s	h h	s
0 — 1	+0·009	8 — 9	−0·004	16 — 17	+0·003
1 — 2	+ ·001	9 — 10	− ·003	17 — 18	+ ·001
2 — 3	+ ·005	10 — 11	− ·004	18 — 19	+ ·001
3 — 4	− ·010	11 — 12	+ ·002	19 — 20	+ ·000
4 — 5	− ·003	12 — 13	+ ·003	20 — 21	− ·006
5 — 6	− ·003	13 — 14	− ·007	21 — 22	+ ·001
6 — 7	+ ·007	14 — 15	− ·001	22 — 23	+ ·001
7 — 8	− ·000	15 — 16	− ·003	23 — 24	+ ·004

The accidental differences between the right ascensions of Eichelberger and the Ottawa ledgers are in all cases small, while Table II indicates these do not seem to be dependent on the right ascension. The Ottawa places are, however, affected by the periodic errors in right ascension introduced through the mean places of Eichelberger.

The collimation, azimuth, and level were applied in the same manner as the previous program and are described in Volume XV, No. 1 of these Publications. The pivot errors shown therein were also applied.

Table III gives the stars and their positions for 1925, as used to determine the azimuth corrections for the instrument. A comparison is also given between the observed and the adopted positions.

TABLE III—AZIMUTH STARS AS ADOPTED FOR DETERMINATIONS OF AZIMUTH

	Name	R. A. 1925			Dec. 1925			Observed —Adopted
		h	m	s	°	′	″	s
43	H Ceph.	0	58	11·007	85	51	20·6	−0·003
α	U. Min.	1	34	13·474	88	54	11·1	+ ·259
	Gr. 642	3	42	25·194	86	24	46·1	+ ·051
	Gr. 750	4	12	24·222	85	21	23·4	− ·052
	Gr. 944	5	37	43·199	85	9	46·7	− ·016
51	H Ceph.	7	5	56·848	87	10	10·3	+ ·119
25	H Camel.	7	15	23·766	82	33	38·5	− ·033
	Gr. 1119	8	23	37·352	88	51	28·6	− ·118
1	H Drac.	9	26	31·621	81	39	35·8	− ·017
29	H Caml.	10	18	59·873	84	38	4·7	+ ·086
30	H Caml.	10	22	5·032	82	56	28·4	+ ·008
	Br. 1672	12	14	31·734	88	6	56·5	+ ·401
32²	H Caml.	12	48	33·902	83	49	13·8	− ·005
	Gr. 2283	15	1	7·521	87	31	18·6	− ·245
ε	U. Min.	16	53	35·480	82	9	47·2	+ ·053
δ	U. Min.	17	56	25·156	86	36	50·0	− ·080
λ	U. Min.	18	52	56·285	89	1	42·2	− ·167
76	Drac.	20	48	6·917	82	15	17·6	− ·027
	Gr. 3548	21	14	36·557	86	43	44·7	+ ·039
32	H Ceph.	22	19	30·272	85	43	53·1	− ·151
39	H Ceph.	23	27	43·318	86	53	37·8	+ ·014

The clamp differences for all zones were investigated by using the stars in the program that were common to Eichelberger. These were brought to the epoch 1925, using Eichelberger proper motions, and were compared by declinations, weighting them by the usual probability formula $\frac{m+n}{m\,n}$. Table IV shows the comparison and the corrections which were applied.

TABLE IV—$\Delta\,\alpha$ (CLAMP WEST-CLAMP EAST) Cos δ

Decl.	$\Delta\alpha$(Cl. W. - Cl. E.) Cos. δ	Wt.	Adopted $\Delta\alpha$(Cl. W. - Cl. E.) Cos. δ	Decl.	$\Delta\alpha$(Cl. W. - Cl. E.) Cos. δ	Wt.	Adopted $\Delta\alpha$(Cl. W. - Cl. E.) Cos. δ
°	s		s	°	s		s
60 L	.....	.....	+0·014	45	+0·019	34	+0·016
65 L	+0·030	11	+ ·012	40	.....	.....	+ ·015
70 L	.....	.....	+ ·010	35	+ ·021	26	+ ·013
75 L	+ ·011	5	+ ·008	30	.....	.....	+ ·011
80 L	.....	.....	+ ·004	25	+ ·007	53	+ ·009
85 L	+ ·001	424	+ ·000	20	.....	.....	+ ·007
90	.....	.....	+ ·000	15	+ ·001	277	+ ·005
85	+ ·000	426	+ ·000	10	.....	.....	+ ·004
80	.....	.....	+ ·004	5	− ·000	336	+ ·002
75	+ ·024	7	+ ·007	0	.....	.....	+ ·000
70	.....	.....	+ ·010	− 5	− ·004	309	− ·002
65	+ ·028	17	+ ·011	−10	.....	.....	− ·005
60	.....	.....	+ ·013	−15	− ·009	162	− ·007
55	+ ·004	26	+ ·014	−20	.....	.....	− ·009
50	.....	.....	+ ·015	−25	− ·014	42	− ·011
	.....	.....	.....	−30	.....	.....	− ·013

The stars, after being corrected in the above manner, were compared above and below the pole. Since the average correction $\Delta\,\alpha$ (upper-lower) was $0^s\cdot001$, no correction was applied.

TABLE V

Wt. Means of	$\Delta\,\alpha$ (Upper-Lower)	Wt.
	s	
Azimuth Stars.....	+0·001	772
Comparison Stars		
80° to 90°.....	+ ·002	54
70° to 80°.....	− ·003	12
60° to 70°.....	+ ·004	23

The weighted mean using all the stars in Table V gave a mean value of $0^s\cdot001$ and no correction was applied for $\Delta\,\alpha$ (Upper-Lower).

DECLINATIONS

The declinations were derived from nadir readings taken at intervals of $1\frac{1}{2}$ hours, and an assumed value for the latitude of the meridian circle of 45° 23′ 39″.00.

Declinations were obtained by taking four bisections for each star, and four microscopes were used throughout the program. The corrections for division errors and micrometer screw corrections were the same as those given in these Publications, Vol. XV, No. 1.

All observations were reduced to the meridian, using the formula:—

$$-\tfrac{1}{2}\,c^2 \operatorname{Sin} 1'' \tan\delta - n.c. \operatorname{Sin} 1'' \operatorname{Sec.}\delta - \tfrac{1}{2}\,n^2 \operatorname{Sin} 1'' \tan\delta$$

where c is the equatorial interval in seconds of arc between the line of collimation and the thread at which the bisection was made, n being the polar deviation of the instrument.

A correction of error of run of the microscopes, and a correction for inclination of the declination wires were both obtained and applied.

REFRACTION

The refraction correction was developed from the formula, $R = R_0\,\beta^A\gamma^\lambda$ where R_0 was a mean refraction based on Bessel's Tabulae Regiomontanae, β^A and γ^λ the terms depending on the barometric pressure and the air temperature at the instrument. The values of R_0 given in Table VI for barometer at 760·52 mm., and outside temperature 10° C., are the same values used in the reduction of stars in Vol. XV, No. 1. It was incorrectly stated in that volume that Pulkowa refraction tables were used.

In Table VII are the values of Δb to correct the barometric readings for both scale and mercury expansion to 0° C.; $b_0 = b + \alpha t$ where t is the Centigrade temperature of the attached barometer.

In Tables VIII to XII are the values needed in reducing the formula $R = R_0\,\beta^A\,\gamma^\lambda$ in the logarithmic form;

$$\text{Consider } R = R_0 + (\beta^A\gamma^\lambda - 1)\,R_0,$$

$$R = R_0 + R_0\,[\log\beta + \log\gamma + (A - 1)\log\beta + (\lambda - 1)\log\gamma + \text{“correction”}]$$

TABLE VI—MEAN REFRACTIONS

Barometer 760·52 mm. Outside Thermometer 10° C.

Z.D.	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	Z.D.
′	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	′
0	0·00	1·02	2·04	3·06	4·08	5·10	6·13	7·16	8·20	9·23	10·28	11·33	12·39	13·46	14·54	0
1	02	04	06	08	10	12	15	18	22	25	30	35	41	48	56	1
2	03	05	07	09	11	13	16	19	23	27	32	37	43	50	58	2
3	05	07	09	11	13	15	18	21	25	28	33	38	44	51	59	3
4	07	09	11	13	15	17	20	23	27	30	35	40	46	53	61	4
5	09	11	13	15	17	19	22	25	29	32	37	42	48	55	63	5
6	10	12	14	16	18	20	23	26	30	34	39	43	50	57	65	6
7	12	14	16	18	20	22	25	28	32	35	40	45	51	59	67	7
8	14	16	18	20	22	24	27	30	34	37	42	47	53	60	68	8
9	15	17	19	21	23	25	28	32	35	39	44	49	55	62	70	9
10	0·17	1·19	2·21	3·23	4·25	5·27	6·30	7·33	8·37	9·41	10·46	11·50	12·57	13·64	14·72	10
11	19	21	23	25	27	29	32	35	39	42	47	52	59	66	74	11
12	20	22	24	26	28	31	34	37	41	44	49	54	60	68	76	12
13	22	24	26	28	30	32	35	39	42	46	51	56	62	69	77	13
14	24	26	28	30	32	34	37	40	44	48	53	58	64	71	79	14
15	26	28	30	32	34	36	39	42	46	49	54	60	66	73	81	15
16	27	29	31	33	35	37	40	44	47	51	56	61	68	75	83	16
17	29	31	33	35	37	39	42	45	49	53	58	63	69	77	85	17
18	31	33	35	37	39	41	44	47	51	55	60	65	71	78	86	18
19	32	34	36	38	40	43	46	49	53	56	61	67	73	80	88	19
20	0·34	1·36	2·38	3·40	4·42	5·44	6·47	7·51	8·54	9·58	10·63	11·68	12·75	13·82	14·90	20
21	36	38	40	42	44	46	49	52	56	60	65	70	76	84	92	21
22	37	39	41	43	45	48	51	54	58	62	67	72	78	86	94	22
23	39	41	43	45	47	49	52	56	59	63	68	74	80	87	95	23
24	41	43	45	47	49	51	54	58	61	65	70	75	82	89	97	24
25	43	45	47	49	51	53	56	59	63	67	72	77	84	91	99	25
26	44	46	48	50	52	55	58	61	65	69	74	79	85	93	15·01	26
27	46	48	50	52	54	56	59	63	66	70	75	81	87	95	03	27
28	48	50	52	54	56	58	61	65	68	72	77	82	89	96	04	28
29	49	51	53	55	57	60	63	66	70	74	79	84	91	98	06	29
30	0·51	1·53	2·55	3·57	4·59	5·62	6·65	7·68	8·72	9·76	10·81	11·86	12·93	14·00	15·08	30
31	53	55	57	59	61	63	66	70	73	77	82	88	94	02	10	31
32	54	56	58	60	62	65	68	71	75	79	84	90	96	04	12	32
33	56	58	60	62	64	67	70	73	77	81	86	91	98	05	13	33
34	58	60	62	64	66	68	71	75	78	83	88	93	13·00	07	15	34
35	60	62	64	66	68	70	73	77	80	84	89	95	01	09	17	35
36	61	63	65	67	69	72	75	78	82	86	91	97	03	11	19	36
37	63	65	67	69	71	74	77	80	84	88	93	98	05	13	21	37
38	65	67	69	71	73	75	78	82	85	90	95	12·00	07	14	22	38
39	66	68	70	72	74	77	80	84	87	91	96	02	09	16	24	39
40	0·68	1·70	2·72	3·74	4·76	5·79	6·82	7·85	8·89	9·93	10·98	12·04	13·10	14·18	15·26	40
41	70	72	74	76	78	80	83	87	90	95	11·00	05	12	20	28	41
42	71	73	75	77	79	82	85	89	92	97	02	07	14	22	30	42
43	73	75	77	79	81	84	87	91	94	98	03	09	16	23	31	43
44	75	77	79	81	83	86	89	92	96	10·00	05	11	17	25	33	44
45	77	79	81	83	85	87	90	94	97	02	07	13	19	27	35	45
46	78	80	82	84	86	89	92	96	99	04	09	14	21	29	37	46
47	80	82	84	86	88	91	94	97	9·01	05	10	16	23	31	39	47
48	82	84	86	88	90	92	95	99	02	07	12	18	25	32	40	48
49	83	85	87	89	91	94	97	8·01	04	09	14	20	26	34	42	49
50	0·85	1·87	2·89	3·91	4·93	5·96	6·99	8·03	9·06	10·11	11·16	12·21	13·28	14·36	15·44	50
51	87	89	91	93	95	98	7·01	04	08	12	17	23	30	38	46	51
52	88	90	92	94	96	99	02	06	09	14	19	25	32	40	48	52
53	90	92	94	96	98	6·01	04	08	11	16	21	27	34	41	49	53
54	92	94	96	98	5·00	03	06	10	13	18	23	28	35	43	51	54
55	94	96	98	4·00	02	04	07	11	14	19	24	30	37	45	53	55
56	95	97	99	01	03	06	09	13	16	21	26	32	39	47	55	56
57	97	99	3·01	03	05	08	11	15	18	23	28	34	41	49	57	57
58	99	2·01	03	05	07	10	13	17	20	25	30	35	42	50	58	58
59	1·00	02	04	06	08	11	14	18	21	26	31	37	44	52	60	59
60	1·02	2·04	3·06	4·08	5·10	6·13	7·16	8·20	9·23	10·28	11·33	12·39	13·46	14·54	15·62	60

TABLE VI—MEAN REFRACTIONS—*Continued*

Barometer 760·52 mm. Outside Thermometer 10° C.—*Continued*

Z.D.	15°	16°	17°	18°	19°	20°	21°	22°	23°	24°	25°	26°	27°	28°	29°	Z.D.
′	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	′
0	15·62	16·72	17·83	18·94	20·07	21·22	22·38	23·55	24·74	25·95	27·18	28·43	29·70	30·99	32·31	0
1	64	74	85	96	09	24	40	57	76	97	20	45	72	31·01	33	1
2	66	76	87	98	11	26	42	59	78	99	22	47	74	03	35	2
3	67	78	89	19·00	13	28	44	61	80	26·01	24	49	76	06	38	3
4	69	79	90	02	15	30	46	63	82	03	26	51	79	08	40	4
5	71	81	92	03	17	32	48	65	84	05	28	54	81	10	42	5
6	73	83	94	05	18	34	50	67	86	07	30	56	83	12	44	6
7	75	85	96	07	20	36	52	69	88	09	33	58	85	14	47	7
8	77	87	98	09	22	37	54	71	90	11	35	60	87	17	49	8
9	78	89	18·00	11	24	39	56	73	92	13	37	62	89	19	51	9
10	15·80	16·90	18·01	19·13	20·26	21·41	22·57	23·75	24·94	26·15	27·39	28·64	29·91	31·21	32·53	10
11	82	92	03	15	28	43	59	77	96	18	41	66	94	23	56	11
12	84	94	05	17	30	45	61	79	98	20	43	68	96	25	58	12
13	86	96	07	18	32	47	63	81	25·00	22	45	71	98	28	60	13
14	88	98	09	20	34	49	65	83	02	24	47	73	30·00	30	62	14
15	89	17·00	11	22	36	51	67	85	04	26	49	75	02	32	64	15
16	91	02	13	24	38	53	69	87	06	28	51	77	04	34	67	16
17	93	03	14	26	40	55	71	89	08	30	53	79	07	36	69	17
18	95	05	16	28	41	57	73	91	10	32	55	81	09	39	71	18
19	97	07	18	30	43	59	75	93	12	34	58	83	11	41	73	19
20	15·99	17·09	18·20	19·32	20·45	21·61	22·77	23·95	25·14	26·36	27·60	28·85	30·13	31·43	32·76	20
21	16·00	11	22	34	47	63	79	97	16	38	62	87	15	45	78	21
22	02	13	24	35	49	65	81	99	18	40	64	90	17	47	80	22
23	04	15	26	37	51	66	83	24·01	20	42	66	92	19	50	82	23
24	06	16	27	39	53	68	85	03	22	44	68	94	22	52	85	24
25	08	18	29	41	55	70	87	05	24	46	70	96	24	54	87	25
26	10	20	31	43	57	72	89	07	26	48	72	98	26	56	89	26
27	11	22	33	45	59	74	91	09	28	50	74	29·00	28	58	91	27
28	13	24	35	47	61	76	93	11	30	52	76	02	30	61	94	28
29	15	26	37	49	63	78	95	13	32	54	78	04	32	63	96	29
30	16·17	17·27	18·38	19·50	20·64	21·80	22·96	24·14	25·34	26·56	27·80	29·06	30·34	31·65	32·98	30
31	19	29	40	52	66	82	98	16	37	59	83	09	37	67	33·00	31
32	21	31	42	54	68	84	23·00	18	39	61	85	11	39	69	02	32
33	22	33	44	56	70	86	02	20	41	63	87	13	41	72	05	33
34	24	35	46	58	72	88	04	22	43	65	89	15	43	74	07	34
35	26	37	48	60	74	90	06	24	45	67	91	17	45	76	09	35
36	28	39	50	62	76	92	08	26	47	69	93	19	47	78	11	36
37	30	40	51	64	78	94	10	28	49	71	95	21	50	80	14	37
38	32	42	53	66	80	95	12	30	51	73	97	23	52	83	16	38
39	33	44	55	67	82	97	14	32	53	75	99	26	54	85	18	39
40	16·35	17·46	18·57	19·69	20·84	21·99	23·16	24·34	25·55	26·77	28·01	29·28	30·56	31·87	33·20	40
41	37	48	59	71	86	22·01	18	36	57	79	03	30	58	89	23	41
42	39	50	61	73	87	03	20	38	59	81	05	32	60	91	25	42
43	41	52	63	75	89	05	22	40	61	83	08	34	62	94	27	43
44	43	53	64	77	91	07	24	42	63	85	10	36	65	96	29	44
45	44	55	66	79	93	09	26	44	65	87	12	38	67	98	31	45
46	46	57	68	81	95	11	28	46	67	89	14	40	69	32·00	34	46
47	48	59	70	83	97	13	30	48	69	91	16	42	71	02	36	47
48	50	61	72	84	99	15	32	50	71	93	18	45	73	05	38	48
49	52	63	74	86	21·01	17	34	52	73	95	20	47	75	07	40	49
50	16·54	17·64	18·75	19·88	21·03	22·19	23·35	24·54	25·75	26·97	28·22	29·49	30·77	32·09	33·43	50
51	55	66	77	90	05	21	37	56	77	27·00	24	51	80	11	45	51
52	57	68	79	92	07	23	39	58	79	02	26	53	82	13	47	52
53	59	70	81	94	09	24	41	60	81	04	28	55	84	16	49	53
54	61	72	83	96	10	26	43	62	83	06	30	57	86	18	52	54
55	63	74	85	98	12	28	45	64	85	08	33	59	88	20	54	55
56	65	76	87	99	14	30	47	66	87	10	35	62	90	22	56	56
57	66	77	88	20·01	16	32	49	68	89	12	37	64	93	24	58	57
58	68	79	90	03	18	34	51	70	91	14	39	66	95	27	61	58
59	70	81	92	05	20	36	53	72	93	16	41	68	97	29	63	59
60	16·72	17·83	18·94	20·07	21·22	22·38	23·55	24·74	25·95	27·18	28·43	29·70	30·99	32·31	33·65	60

TABLE VI—MEAN REFRACTIONS—*Continued*

Barometer 760·52 mm. Outside Thermometer 10° C.—*Continued*

Z.D.	30°	31°	32°	33°	34°	35°	36°	37°	38°	39°	40°	41°	42°	43°	44°	Z.D.
′	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	′
0	33·65	35·02	36·41	37·84	39·30	40·80	42·33	43·90	45·52	47·17	48·88	50·63	52·44	54·31	56·24	0
1	67	04	43	86	32	83	36	93	55	20	91	66	47	34	27	1
2	70	07	46	89	35	85	38	95	57	23	94	69	50	37	31	2
3	72	09	48	91	37	88	41	98	60	25	97	72	53	40	34	3
4	74	11	50	94	40	90	43	44·01	63	28	49·00	75	56	44	37	4
5	76	13	53	96	42	93	46	03	66	31	02	78	59	47	40	5
6	79	16	55	98	45	95	49	06	68	34	05	81	63	50	44	6
7	81	18	58	38·01	47	98	51	09	71	37	08	84	66	53	47	7
8	83	20	60	03	50	41·00	54	11	74	40	11	87	69	56	50	8
9	85	23	62	06	52	03	56	14	77	42	14	90	72	59	54	9
10	33·88	35·25	36·65	38·08	39·55	41·05	42·59	44·17	45·79	47·45	49·17	50·93	52·75	54·63	56·57	10
11	90	27	67	10	57	08	62	19	82	48	20	96	78	66	60	11
12	92	30	69	13	60	10	64	22	85	51	23	99	81	69	64	12
13	94	32	72	15	62	13	67	25	88	54	26	51·02	84	72	67	13
14	97	34	74	18	65	15	69	27	90	57	29	05	87	75	70	14
15	99	36	76	20	67	18	72	30	93	59	31	08	90	78	73	15
16	34·01	39	79	22	69	21	75	33	96	62	34	11	94	82	77	16
17	04	41	81	25	72	23	77	35	98	65	37	14	97	85	80	17
18	06	43	84	27	74	26	80	38	46·01	68	40	17	53·00	88	83	18
19	08	46	86	30	77	28	82	41	04	71	43	20	03	91	87	19
20	34·10	35·48	36·88	38·32	39·79	41·31	42·85	44·43	46·07	47·74	49·46	51·23	53·06	54·94	56·90	20
21	13	50	91	34	82	33	88	46	09	76	49	26	09	97	93	21
22	15	53	93	37	84	36	90	49	12	79	52	29	12	55·01	97	22
23	17	55	95	39	87	38	93	51	15	82	55	32	15	04	57·00	23
24	19	57	98	42	89	41	95	54	18	85	58	35	18	07	03	24
25	22	59	37·00	44	92	43	98	57	20	88	60	38	21	10	06	25
26	24	62	03	46	94	46	43·01	59	23	91	63	41	25	13	10	26
27	26	64	05	49	97	48	03	62	26	93	66	44	28	16	13	27
28	28	66	07	51	99	51	06	65	29	96	69	47	31	20	16	28
29	31	69	10	54	40·02	53	08	67	31	99	72	50	34	23	20	29
30	34·33	35·71	37·12	38·56	40·04	41·56	43·11	44·70	46·34	48·02	49·75	51·53	53·37	55·26	57·23	30
31	35	73	14	58	07	59	14	73	37	05	78	56	40	29	26	31
32	38	76	17	61	09	61	16	75	40	08	81	59	43	33	30	32
33	40	78	19	63	12	64	19	78	42	11	84	62	46	36	33	33
34	42	80	22	66	14	66	22	81	45	13	87	65	50	39	36	34
35	44	83	24	68	17	69	24	84	48	16	90	68	53	42	40	35
36	47	85	26	71	19	71	27	86	51	19	93	71	56	46	43	36
37	49	87	29	73	22	74	29	89	53	22	96	74	59	49	46	37
38	51	90	31	76	24	77	32	92	56	25	98	77	62	52	50	38
39	54	92	34	78	27	79	35	95	59	28	50·01	80	65	55	53	39
40	34·56	35·94	37·36	38·81	40·29	41·82	43·37	44·97	46·62	48·31	50·04	51·83	53·68	55·59	57·56	40
41	58	97	38	83	32	84	40	45·00	64	34	07	86	71	62	60	41
42	61	99	41	86	34	87	43	03	67	36	10	89	75	65	63	42
43	63	36·01	43	88	37	89	45	06	70	39	13	92	78	68	66	43
44	65	04	46	91	39	92	48	08	73	42	16	95	81	72	70	44
45	67	06	48	93	42	94	50	11	75	45	19	98	84	75	73	45
46	70	08	50	95	45	97	53	14	78	48	22	52·02	87	78	76	46
47	72	11	53	98	47	42·00	56	16	81	51	25	05	90	82	80	47
48	74	13	55	39·00	50	02	58	19	84	54	28	08	93	85	83	48
49	77	15	58	03	52	05	61	22	87	56	31	11	97	88	86	49
50	34·79	36·18	37·60	39·05	40·55	42·07	43·64	45·25	46·89	48·59	50·34	52·14	54·00	55·91	57·90	50
51	81	20	62	08	57	10	66	27	92	62	37	17	03	95	93	51
52	84	22	65	10	60	12	69	30	95	65	40	20	06	98	96	52
53	86	25	67	13	62	15	72	33	98	68	42	23	09	56·01	58·00	53
54	88	27	70	15	65	18	74	36	47·00	71	45	26	12	04	03	54
55	90	29	72	18	67	20	77	38	03	74	48	29	15	08	06	55
56	93	32	74	20	70	23	79	41	06	77	51	32	18	11	10	56
57	95	34	77	23	72	25	82	44	09	79	54	35	22	14	13	57
58	97	36	79	25	75	28	85	47	11	82	57	38	25	17	16	58
59	35·00	39	82	28	78	30	87	49	14	85	60	41	28	21	20	59
60	35·02	36·41	37·84	39·30	40·80	42·33	43·90	45·52	47·17	48·88	50·63	52·44	54·31	56·24	58·23	60

TABLE VI—MEAN REFRACTIONS—*Continued*

Barometer 760·52 mm. Outside Thermometer 10° C.—*Continued*

Z.D.	45°	46°	47°	48°	49°	50°	51°	52°	53°	54°	55°	56°	57°	58°	59°	Z.D.
′	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	′
0	58·23	60·29	62·43	64·65	66·96	69·36	71·87	74·48	77·21	80·06	83·06	86·21	89·52	93·02	96·71	0
1	26	33	47	69	67·00	40	91	52	26	11	11	26	58	08	77	1
2	30	36	50	73	04	44	96	57	30	16	16	32	63	14	84	2
3	33	40	54	76	08	48	72·00	61	35	21	21	37	69	20	90	3
4	37	43	58	80	12	53	04	66	40	26	27	43	75	26	97	4
5	40	47	61	84	16	57	08	70	44	31	32	48	80	32	97·03	5
6	43	50	65	88	20	61	13	75	49	36	37	53	86	38	09	6
7	47	54	69	92	24	65	17	79	54	41	42	59	92	44	16	7
8	50	57	72	96	27	69	21	84	59	45	47	64	97	49	22	8
9	54	61	76	99	31	73	26	88	63	50	52	70	90·03	55	29	9
10	58·57	60·64	62·80	65·03	67·35	69·77	72·30	74·93	77·68	80·55	83·57	86·75	90·09	93·61	97·35	10
11	60	68	83	07	39	81	34	97	73	60	63	80	14	67	41	11
12	64	71	87	11	43	86	39	75·02	77	65	68	86	20	73	48	12
13	67	75	91	15	47	90	43	06	82	70	73	91	26	79	54	13
14	71	78	94	19	51	94	47	11	87	75	78	97	31	85	61	14
15	74	82	98	22	55	98	51	15	91	80	83	87·02	37	91	67	15
16	77	86	63·02	26	59	70·02	56	20	96	85	88	07	43	97	73	16
17	81	89	05	30	63	06	60	24	78·01	90	94	13	49	94·03	80	17
18	84	93	09	34	67	10	64	29	06	95	99	18	54	10	86	18
19	88	96	13	38	71	15	69	33	10	81·00	84·04	24	60	16	93	19
20	58·91	61·00	63·16	65·42	67·75	70·19	72·73	75·38	78·15	81·05	84·09	87·29	90·66	94·22	97·99	20
21	94	03	20	45	79	23	77	42	20	10	15	35	72	28	98·06	21
22	98	07	24	49	83	27	82	47	24	15	20	40	78	34	12	22
23	59·01	10	27	53	86	31	86	51	29	19	25	46	83	41	19	23
24	05	14	31	57	90	35	90	56	34	24	30	51	89	47	25	24
25	08	17	35	61	94	39	94	60	38	29	36	57	95	53	32	25
26	11	21	38	65	98	43	99	65	43	34	41	62	91·01	59	38	26
27	15	24	42	68	68·02	48	73·03	69	48	39	46	68	07	65	45	27
28	18	28	46	72	06	52	07	74	53	44	51	73	12	72	51	28
29	22	31	49	76	10	56	12	78	57	49	57	79	18	78	58	29
30	59·25	61·35	63·53	65·80	68·14	70·60	73·16	75·83	78·62	81·54	84·62	87·84	91·24	94·84	98·64	30
31	28	39	57	84	18	64	20	88	67	59	67	90	30	90	71	31
32	32	42	60	88	22	68	25	92	72	64	72	95	36	96	77	32
33	35	46	64	92	26	73	29	97	76	69	78	88·01	42	95·03	84	33
34	39	49	68	95	30	77	34	76·01	81	74	83	06	47	09	90	34
35	42	53	72	99	34	81	38	06	86	79	88	12	53	15	97	35
36	46	57	75	66·03	38	85	42	11	91	84	93	17	59	21	99·03	36
37	49	60	79	07	42	90	47	15	96	89	98	23	65	27	10	37
38	53	64	83	11	47	94	51	20	79·00	94	85·04	28	71	34	16	38
39	56	67	87	15	51	98	56	24	05	82·00	09	34	77	40	23	39
40	59·60	61·71	63·90	66·19	68·55	71·02	73·60	76·29	79·10	82·05	85·14	88·39	91·83	95·46	99·29	40
41	63	75	94	23	59	07	64	34	15	10	19	45	89	52	36	41
42	67	78	98	26	63	11	69	38	20	15	24	50	94	58	42	42
43	70	82	64·02	30	67	15	73	43	24	20	30	56	92·00	65	49	43
44	74	85	05	34	71	19	78	47	29	25	35	61	06	71	55	44
45	77	89	09	38	75	23	82	52	34	30	40	67	12	77	62	45
46	80	93	13	42	79	28	86	57	39	35	45	73	18	83	69	46
47	84	96	16	46	83	32	91	61	44	40	51	78	24	90	75	47
48	87	62·00	20	50	87	36	95	66	48	45	56	84	30	96	82	48
49	91	03	24	53	91	40	74·00	70	53	50	62	90	36	96·02	89	49
50	59·94	62·07	64·28	66·57	68·95	71·45	74·04	76·75	79·58	82·55	85·67	88·95	92·42	96·08	99·95	50
51	98	11	31	61	99	49	08	80	63	60	72	89·01	48	15	100·02	51
52	60·01	14	35	65	69·03	53	13	84	68	65	78	07	54	21	09	52
53	05	18	39	69	08	57	17	88	72	71	83	12	60	27	15	53
54	08	21	43	73	12	62	22	93	77	76	89	18	66	33	22	54
55	12	25	46	77	16	66	26	98	82	81	94	24	72	40	29	55
56	15	29	50	81	20	70	30	77·03	87	86	99	29	78	46	35	56
57	19	32	54	84	24	74	35	07	92	91	86·05	35	84	52	42	57
58	22	36	58	88	28	79	39	12	96	96	10	41	90	58	49	58
59	26	39	61	92	32	83	44	16	80·01	83·01	16	46	96	65	55	59
60	60·29	62·43	64·65	66·96	69·36	71·87	74·48	77·21	80·06	83·06	86·21	89·52	93·02	96·71	100·62	60

TABLE VI—MEAN REFRACTIONS—*Concluded*

Barometer 760·52 mm. Outside Thermometer 10° C.—*Concluded*

Z.D.	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	Z.D.
′	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	′
0	100·62	104·77	109·19	113·90	118·94	124·35	130·17	136·45	143·26	150·67	158·76	167·65	177·44	188·33	200·46	0
1	69	84	27	98	119·03	44	27	56	38	80	90	81	61	52	67	1
2	76	91	34	114·06	12	54	37	67	50	93	159·05	96	79	72	89	2
3	82	99	42	15	20	63	47	78	62	151·06	19	168·12	96	91	201·10	3
4	89	105·06	50	23	29	73	57	89	74	19	33	27	178·14	189·10	32	4
5	96	13	57	31	38	82	68	137·00	85	32	47	43	31	29	53	5
6	101·03	20	65	39	47	92	78	11	97	45	62	59	48	49	75	6
7	10	27	73	47	56	125·01	88	22	144·09	58	76	74	66	68	96	7
8	16	35	80	56	64	11	98	33	21	71	90	90	83	87	202·18	8
9	23	42	88	64	73	20	131·08	44	33	84	160·05	169·05	179·01	190·07	39	9
10	101·30	105·49	109·96	114·72	119·82	125·30	131·18	137·55	144·45	151·97	160·19	169·21	179·18	190·26	202·61	10
11	37	56	110·03	80	91	39	28	66	57	152·10	33	37	36	46	83	11
12	44	63	11	88	120·00	49	38	77	69	23	48	53	53	65	203·05	12
13	50	71	19	97	08	58	49	88	81	36	62	69	71	85	27	13
14	57	78	26	115·05	17	68	59	99	93	49	77	85	89	191·04	49	14
15	64	85	34	13	26	77	69	138·10	145·06	63	91	170·00	180·06	24	71	15
16	71	92	42	21	35	87	79	22	18	76	161·05	16	24	44	94	16
17	78	106·00	49	30	44	96	89	33	30	89	20	32	42	63	204·16	17
18	85	07	57	38	53	126·06	132·00	44	42	153·02	34	48	60	83	38	18
19	91	15	65	46	61	15	10	55	54	15	49	64	77	192·02	60	19
20	101·98	106·22	110·73	115·55	120·70	126·25	132·20	138·66	145·66	153·28	161·63	170·80	180·95	192·22	204·82	20
21	102·05	29	80	63	79	34	30	77	78	41	78	96	181 13	42	205·04	21
22	12	37	88	71	88	44	41	89	90	55	92	171·12	31	62	27	22
23	19	44	96	80	97	53	51	139·00	146·03	68	162·07	29	49	82	49	23
24	26	51	111·04	88	121·06	63	62	11	15	82	22	45	67	193·02	72	24
25	33	59	11	96	15	72	72	23	27	95	36	61	85	22	94	25
26	40	66	19	116·05	23	82	82	34	39	154·08	51	77	182·04	42	206·17	26
27	46	73	27	13	32	91	93	45	51	22	66	93	22	62	39	27
28	53	81	35	21	41	127·01	133·03	56	64	35	81	172·10	40	82	62	28
29	60	88	42	30	50	10	14	68	76	49	95	26	58	194·02	84	29
30	102·67	106·95	111·50	116·38	121·59	127·20	133·24	139·79	146·88	154·62	163·10	172·42	182·76	194·22	207·07	30
31	74	107·02	58	46	68	30	35	90	147·00	76	25	58	94	42	30	31
32	81	10	66	55	77	39	45	140·02	13	89	40	75	183·13	63	53	32
33	88	17	74	63	86	49	56	13	25	155·03	54	91	31	83	76	33
34	95	25	82	72	95	59	66	25	38	16	69	173·08	50	195·04	99	34
35	103·02	32	90	80	122·04	69	77	36	50	30	84	24	68	24	208·21	35
36	09	39	98	88	13	78	88	47	62	44	99	40	86	44	44	36
37	16	47	112·06	97	22	88	98	59	75	57	164·14	57	184·05	65	67	37
38	22	54	13	117·05	32	98	134·09	70	87	71	28	73	23	85	90	38
39	29	62	21	14	41	128·07	19	82	148·00	84	43	90	42	196·06	209·13	39
40	103·36	107·69	112·29	117·22	122·50	128·17	134·30	140·93	148·12	155·98	164·58	174·06	184·60	196·26	209·36	40
41	43	76	37	30	59	27	41	141·05	25	156·12	73	23	78	47	59	41
42	50	83	45	39	68	37	51	16	37	26	88	40	97	68	83	42
43	57	91	53	47	77	47	62	28	50	39	165·04	56	185·15	88	210·06	43
44	64	99	61	56	86	57	73	39	62	53	19	73	34	197·09	30	44
45	71	108·06	69	64	95	66	84	51	75	67	34	90	52	30	53	45
46	78	14	77	73	123·04	76	94	63	88	81	49	175·07	71	51	76	46
47	85	21	85	81	14	86	135·05	74	149·00	95	64	24	89	72	211·00	47
48	92	29	93	90	23	96	16	86	13	157·08	80	40	186·08	92	23	48
49	99	36	113·01	99	32	129·06	26	97	25	22	95	57	26	198·13	47	49
50	104·06	108·44	113·09	118·07	123·42	129·16	135·37	142·09	149·38	157·36	166·10	175·74	186·45	198·34	211·70	50
51	13	51	17	16	51	26	48	21	51	50	25	91	64	55	94	51
52	20	59	25	25	60	36	59	32	64	64	41	176·08	83	76	212·18	52
53	28	66	34	33	70	46	69	44	77	78	56	25	187·01	98	42	53
54	35	74	42	42	79	56	80	56	90	92	72	42	20	199·19	66	54
55	42	81	50	51	88	67	91	67	150·02	158·06	87	59	39	40	90	55
56	49	89	58	59	98	77	136·02	79	15	20	167·03	76	58	61	213·14	56
57	56	96	66	68	124·07	87	13	91	28	34	18	93	77	82	38	57
58	63	109·04	74	77	16	97	23	143·03	41	48	34	177·10	95	200·04	62	58
59	70	11	82	85	26	130·07	34	14	54	62	49	27	188·14	25	86	59
60	104·77	109·19	113·90	118·94	124·35	130·17	136·45	143·26	150·67	158·76	167·65	177·44	188·33	200·46	214·10	60

Z. D.		R_0	Z. D.		R_0	Z. D.		R_0
°	′	″	°	′	″	°	′	″
75	00	214·10	80	00	319·16	85	00	591·99
	15	217·78		15	326·93		15	617·19
	30	221·58		30	335·10		30	644·36
	45	225·50		45	343·65		45	673·79
76	00	229·55	81	00	352·60	86	00	705·80
	15	233·74		15	362·01		15	740·71
	30	238·07		30	371·90		30	778·82
	45	242·54		45	382·33		45	820·69
77	00	247·20	82	00	393·33	87	00	866·78
	15	252·00		15	404·92		15	917·65
	30	256·98		30	417·15		30	974·22
	45	262·15		45	430·06		45	1037·25
78	00	267·52	83	00	443·86	88	00	1107·74
	15	273·11		15	458·49		15	1187·15
	30	278·90		30	473·97		30	1277·03
	45	284·94		45	490·47			
79	00	291·20	84	00	508·07	89	00	1494·00
	15	297·76		15	526·88	90	00	2189·00
	30	304·58		30	546·99			
	45	311·70		45	568·63			

TABLE VII—CORRECTION TO BAROMETER

$$\Delta b = -\alpha t$$

b	α
mm.	mm.
720	$0{\cdot}1158_{16}$
730	$\cdot 1174_{16}$
740	$\cdot 1190_{16}$
750	$\cdot 1206_{16}$
760	$\cdot 1222_{16}$
770	$\cdot 1238_{16}$
780	·1254

TABLE VIII—REFRACTION TERM DEPENDING ON BAROMETER

b_0	$\text{Log}_e\beta$	b_0	$\text{Log}_e\beta$	b_0	$\text{Log}_e\beta$
mm.		mm.		mm.	
725	$-0\cdot0478_{13}$	745	$-0\cdot0206_{13}$	765	$0\cdot0059_{13}$
726	$\cdot0465_{14}$	746	$\cdot0193_{14}$	766	$\cdot0072_{13}$
727	$\cdot0451_{14}$	747	$\cdot0179_{13}$	767	$\cdot0085_{13}$
728	$\cdot0437_{14}$	748	$\cdot0166_{13}$	768	$\cdot0098_{13}$
729	$\cdot0423_{13}$	749	$\cdot0153_{14}$	769	$\cdot0111_{13}$
730	$-0\cdot0410_{14}$	750	$-0\cdot0139_{13}$	770	$0\cdot0124_{13}$
731	$\cdot0396_{14}$	751	$\cdot0126_{13}$	771	$\cdot0137_{13}$
732	$\cdot0382_{13}$	752	$\cdot0113_{14}$	772	$\cdot0150_{13}$
733	$\cdot0369_{14}$	753	$\cdot0099_{13}$	773	$\cdot0163_{13}$
734	$\cdot0355_{14}$	754	$\cdot0086_{13}$	774	$\cdot0176_{13}$
735	$-0\cdot0341_{13}$	755	$-0\cdot0073_{13}$	775	$0\cdot0189_{13}$
736	$\cdot0328_{14}$	756	$\cdot0060_{14}$	776	$\cdot0202_{13}$
737	$\cdot0314_{13}$	757	$\cdot0046_{13}$	777	$\cdot0214_{13}$
738	$\cdot0301_{14}$	758	$\cdot0033_{13}$	778	$\cdot0227_{13}$
739	$\cdot0287_{13}$	759	$\cdot0020_{13}$	779	$\cdot0240_{13}$
740	$-0\cdot0274_{14}$	760	$-0\cdot0007_{13}$	780	$0\cdot0253$
741	$\cdot0260_{13}$	761	$+\cdot0006_{13}$		
742	$\cdot0247_{14}$	762	$\cdot0019_{14}$		
743	$\cdot0233_{13}$	763	$\cdot0033_{13}$		
744	$\cdot0220_{14}$	764	$\cdot0046_{13}$		

TABLE IX—REFRACTION TERM DEPENDING ON TEMPERATURE

t_0	$\text{Log}_e\gamma$	t_0	$\text{Log}_e\gamma$	t_0	$\text{Log}_e\gamma$
−35°	$0\cdot1722_{41}$	−10°	$0\cdot0729_{38}$	15°	$-0\cdot0174_{35}$
−34	$\cdot1681_{42}$	− 9	$\cdot0691_{37}$	16	$-\cdot0209_{34}$
−33	$\cdot1639_{41}$	− 8	$\cdot0654_{38}$	17	$-\cdot0243_{34}$
−32	$\cdot1598_{41}$	− 7	$\cdot0616_{37}$	18	$-\cdot0277_{34}$
−31	$\cdot1557_{41}$	− 6	$\cdot0579_{37}$	19	$-\cdot0311_{34}$
−30	$0\cdot1516_{41}$	− 5	$0\cdot0542_{37}$	20	$-0\cdot0345_{34}$
−29	$\cdot1475_{41}$	− 4	$\cdot0505_{37}$	21	$-\cdot0379_{34}$
−28	$\cdot1434_{40}$	− 3	$\cdot0468_{37}$	22	$-\cdot0413_{34}$
−27	$\cdot1394_{41}$	− 2	$\cdot0431_{37}$	23	$-\cdot0447_{33}$
−26	$\cdot1353_{40}$	− 1	$\cdot0394_{36}$	24	$-\cdot0480_{34}$
−25	$0\cdot1313_{40}$	0	$0\cdot0358_{36}$	25	$-0\cdot0514_{33}$
−24	$\cdot1273_{40}$	1	$\cdot0322_{37}$	26	$-\cdot0547_{34}$
−23	$\cdot1233_{40}$	2	$\cdot0285_{36}$	27	$-\cdot0581_{33}$
−22	$\cdot1193_{39}$	3	$\cdot0249_{36}$	28	$-\cdot0614_{33}$
−21	$\cdot1154_{39}$	4	$\cdot0213_{36}$	29	$-\cdot0647_{32}$
−20	$0\cdot1115_{40}$	5	$0\cdot0177_{36}$	30	$-0\cdot0679_{33}$
−19	$\cdot1075_{39}$	6	$\cdot0142_{36}$	31	$-\cdot0712_{33}$
−18	$\cdot1036_{39}$	7	$\cdot0106_{35}$	32	$-\cdot0745_{33}$
−17	$\cdot0997_{38}$	8	$\cdot0071_{36}$	33	$-\cdot0778_{32}$
−16	$\cdot0959_{39}$	9	$\cdot0035_{35}$	34	$-\cdot0810_{32}$
−15	$0\cdot0920_{39}$	10	$0\cdot0000_{35}$	35	$-0\cdot0842$
−14	$\cdot0881_{38}$	11	$-\cdot0035_{35}$		
−13	$\cdot0843_{38}$	12	$-\cdot0070_{35}$		
−12	$\cdot0805_{38}$	13	$-\cdot0105_{35}$		
−11	$\cdot0767_{38}$	14	$-\cdot0140_{34}$		

TABLE X—FACTOR FOR CORRECTION OF LOG. β

Z	A − 1
77°	0·003
78	·003
79	·004
80	·004
81	·005
82	·006
83	·008
84	·010
85	·013

TABLE XI—FACTOR FOR CORRECTION OF LOG. γ

Z	λ − 1	Z	0′	10′	20′	30′	40′	50′
45°	0·002	75°	0·020	0·020	0·020	0·021	0·021	0·022
50	·002	76	·022	·023	·023	·024	·024	·025
55	·003	77	·025	·026	·026	·027	·028	·029
60	·005	78	·030	·031	·032	·033	·034	·035
65	·007	79	·036	·037	·038	·039	·040	·041
70	·011	80	·042	·043	·044	·045	·047	·048
71	·012	81	·049	·051	·052	·054	·056	·058
72	·014	82	·060	·062	·065	·067	·070	·073
73	·016	83	·075	·078	·082	·085	·088	·091
74	·018	84	·095	·099	·104	·108	·113	·118
75	·020	85	·123					

TABLE XII—CORRECTION TO LOG $\beta^{A}\gamma^{\lambda}$

Log $\beta^{A}\gamma^{\lambda}$	Correction	Log $\beta^{A}\gamma^{\lambda}$	Correction	Log $\beta^{A}\gamma^{\lambda}$	Correction	Log $\beta^{A}\gamma^{\lambda}$	Correction
−0·20	$0{\cdot}0187_{17}$	−0·10	$0{\cdot}0048_{9}$	0·01	$0{\cdot}0001_{1}$	0·11	$0{\cdot}0063_{12}$
− ·19	$\cdot0170_{17}$	− ·09	$\cdot0039_{8}$	·02	$\cdot0002_{3}$	·12	$\cdot0075_{13}$
− ·18	$\cdot0153_{16}$	− ·08	$\cdot0031_{7}$	·03	$\cdot0005_{3}$	·13	$\cdot0088_{15}$
− ·17	$\cdot0137_{16}$	− ·07	$\cdot0024_{6}$	·04	$\cdot0008_{5}$	·14	$\cdot0103_{15}$
− ·16	$\cdot0121_{14}$	− ·06	$\cdot0018_{6}$	·05	$\cdot0013_{5}$	·15	$\cdot0118_{17}$
− ·15	$\cdot0107_{13}$	− ·05	$\cdot0012_{4}$	·06	$\cdot0018_{7}$	·16	$\cdot0135_{18}$
− ·14	$\cdot0094_{13}$	− ·04	$\cdot0008_{4}$	·07	$\cdot0025_{8}$	·17	$\cdot0153_{19}$
− ·13	$\cdot0081_{12}$	− ·03	$\cdot0004_{2}$	·08	$\cdot0033_{9}$	·18	$\cdot0172_{20}$
− ·12	$\cdot0069_{11}$	− ·02	$\cdot0002_{2}$	·09	$\cdot0042_{10}$	·19	$\cdot0192_{22}$
− ·11	$\cdot0058_{10}$	− ·01	·0000	·10	$\cdot0052_{11}$	·20	·0214

Corrections for the variation of latitude were computed from the values given by the International Latitude Service. The corrections which were applied to the declinations are given in Table XIII.

Determinations of horizontal flexures were made, using the north and south collimators. The readings and corrections are given in Table XIV.

TABLE XIII—VARIATION OF LATITUDE

Year and Fraction of Year	0·0	0·1	0·2	0·3	0·4	0·5	0·6	0·7	0·8	0·9	Year
	"	"	"	"	"	"	"	"	"	"	
1923	.....	.....	.....	.....	.....	.....	.....	.....	+0·04	−0·07	1923
1924	−0·11	−0·13	−0·04	+0·03	+0·08	+0·11	+0·12	+0·08	+0·03	−0·03	1924
1925	− ·08	− ·13	− ·11	− ·03	+ ·01	+ ·03	+ ·02	− ·02	− ·06	− ·09	1925
1926	− ·11	− ·13	− ·08	− ·03	+ ·00	+ ·04	+ ·07	+ ·04	+ ·01	+ ·01	1926
1927	+ ·00	− ·01	− ·03	− ·03	+ ·01	+ ·03	+ ·01	− ·04	− ·05	− ·07	1927
1928	− ·08	− ·04	+ ·00	+ ·03	+ ·06	+ ·04	+ ·01	− ·02	− ·04	− ·02	1928
1929	+ ·00	+ ·02	+ ·06	+ ·12	+ ·14	+ ·08	− ·01	− ·07	− ·11	− ·13	1929
1930	− ·10	− ·01	+ ·07	+ ·13	+ ·16	+ ·15	+ ·11	+ ·01	− ·06	− ·10	1930
1931	− ·07	− ·01	+ ·05	+ ·12	+ ·18	+ ·20	+ ·16	+ ·06	− ·05	− ·12	1931
1932	− ·15	− ·13	− ·04	+ ·06	+ ·14	+ ·18	+ ·18	+ ·16	+ ·08	+ ·01	1932
1933	− ·06	− ·09	− ·05	+ ·02	+ ·08	+ ·12	+ ·11	+ ·09	+ ·05	+ ·00	1933
1934	− ·05	− ·06	− ·04	+ ·00	+ ·05	+ ·11	+ ·14	+ ·13	+ ·09	+ ·04	1934
1935	− ·02	− ·01	+ ·00	+ ·03	.....	.....	.....	.....	.....	.....	1935

TABLE XIV—HORIZONTAL FLEXURE MEASURES

Date	Obs.	Horizontal Flexure			Dec.	Flexure Corrections Δ δ
		Cl. E.	Cl. W.	Mean		
		″	″	″	° ′	″
1924						
April 1	.....	−0·50	+0·36	−0·07	44 36 L	
						+0·09
1925					63 47 L	
April 1	C S	− ·51	+ ·37	.....		+ ·08
April 1	R M	− ·59	− ·56	.....	78 10 L	
Sept. 4	C S	+ ·56	+ ·66	.....		+ ·07
Oct. 1	C S	− ·24	+ ·51	.....	88 22 L	
Oct. 1	H S	− ·44	+ ·69	.....		+ ·06
Nov. 2	C S	− ·20	·00	.....	90 0	
Nov. 2	R M	− ·47	− ·27	.....		− ·06
Nov. 2	C S	+ ·02	+ ·41	.....	83 5	
Nov. 2	R M	+ ·16	− ·27	− ·01		− ·05
					75 24	
1929						− ·04
Sept. 3	H S	+ ·34	− ·10	.....	68 17	
Sept. 16	H S	− ·54	− ·82	.....		− ·03
Sept. 19	R M	− ·50	− ·05	.....	61 32	
Sept. 19	H S	− ·16	− ·04	.....		− ·02
Sept. 21	H S	− ·66	− ·22	.....	55 00	
Sept. 21	R M	− ·62	− ·17	.....		− ·01
Sept. 23	R M	+ ·40	+ ·32	.....	48 35	
Sept. 23	M	+ ·35	+ ·19	.....		·00
Sept. 25	M	− ·52	− ·48	.....	42 13	
Sept. 25	R M	− ·43	− ·68	.....		+ ·01
Oct. 1	C S	+ ·04	− ·27	.....	35 48	
Oct. 1	M	+ ·25	− ·20	− ·19		+ ·02
					29 16	
1930						+ ·03
April 3	M	+ ·05	+ ·24	.....	22 31	
July 8	C S	+ ·05	− ·26	.....		+ ·04
Aug. 1	C S	− ·67	+ ·28	.....	15 24	
Aug. 29	M	− ·37	− ·12	.....		+ ·05
Nov. 29	R M	− ·65	− ·62	− ·21	7 43	
						+ ·06
1931					−0 50	
Sept. 15	C S	− ·32	− ·10	.....		+ ·07
Oct. 3	H S	+ ·35	+ ·33	.....	−11 2	
Nov. 5	M	+ ·02	+ ·03	+ ·05		+ ·08
					−25 25	
1932						+ ·09
Aug. 16	M	+ ·37	(−1·35)	.....	−44 36	
Nov. 4	M	+ ·14	+ ·32	.....		
Nov. 4	R M	− ·23	+ ·33	− ·07		
Mean	.....	− ·17	− ·01	− ·09		

A comparison was made between the results of Clamp East and Clamp West, using clock and other Eichelberger stars and azimuth stars. The results are given in Tables XV and XVI. The subscript numbers indicate the weight computed with the formula $\frac{m\,n}{m + n}$ where m and n are the number of observations in each clamp.

TABLE XV—COMPARISONS OF DECLINATIONS CLAMP EAST AND CLAMP WEST

CLOCK STARS

$\Delta\delta$ (E–W)

Dec. \ R.A.	h h 0 to 4	h h 4 to 8	h h 8 to 12	h h 12 to 16	h h 16 to 20	h h 20 to 24	Mean
°	″	″	″	″	″	″	″
−15	$-0\cdot90_{6}$	$-0\cdot50_{1}$	$-0\cdot27_{30}$	$-0\cdot47_{68}$	$-0\cdot59_{51}$	$-0\cdot53_{51}$	$-0\cdot50_{207}$
−10	$-\cdot44_{47}$	$-\cdot90_{28}$	$-\cdot39_{40}$	$-\cdot50_{82}$	$-\cdot50_{78}$	$-\cdot63_{83}$	$-\cdot54_{358}$
− 5	$-\cdot44_{20}$	$-\cdot39_{76}$	$-\cdot19_{6}$	$-\cdot77_{43}$	$-\cdot43_{116}$	$-\cdot88_{18}$	$-\cdot49_{279}$
0	$-\cdot31_{10}$	$-\cdot65_{27}$	$-\cdot24_{31}$	$-\cdot55_{92}$	.....	$-\cdot34_{71}$	$-\cdot44_{231}$
5	$-\cdot60_{41}$	$-\cdot48_{41}$	$-\cdot33_{71}$	$-\cdot41_{54}$	$-\cdot44_{140}$	$-\cdot42_{60}$	$-\cdot44_{407}$
10	$-\cdot33_{50}$	$-\cdot52_{13}$	$-\cdot40_{148}$	$-\cdot33_{26}$	$-\cdot39_{66}$	$-\cdot35_{40}$	$-\cdot38_{358}$
15	$-\cdot41_{22}$	$-\cdot52_{58}$	$-\cdot39_{78}$	$-\cdot53_{24}$	$-\cdot38_{64}$	$-\cdot27_{32}$	$-\cdot41_{280}$
20	$-\cdot31_{24}$	$-\cdot30_{18}$	$-\cdot23_{12}$	$-\cdot47_{62}$	$-\cdot43_{80}$	$-\cdot46_{31}$	$-\cdot41_{227}$
Mean.....	$-\cdot43_{229}$	$-\cdot51_{258}$	$-\cdot36_{411}$	$-\cdot51_{452}$	$-\cdot45_{595}$	$-\cdot47_{386}$	$-\cdot45_{2331}$

TABLE XVI—EICHELBERGER STARS $\Delta\delta$(E–W)

Zone	$\Delta\delta$ (E–W)
	″
−30° to −20°	$-0\cdot64_{48}$
−20 to −10	$-\cdot70_{18}$
−10 to 0	$-\cdot60_{4}$
0 to 10	$-\cdot23_{5}$
10 to 20	$-\cdot54_{11}$
20 to 30	$-\cdot45_{47}$
30 to 40	$-\cdot41_{34}$
40 to 50	$-\cdot37_{45}$
50 to 60	$-\cdot60_{24}$
60 to 70	$-.48_{19}$
70 to 80	$-\cdot33_{10}$
80 to 90	$-\cdot52_{35}$
90 to 80L	$+\cdot45_{29}$
80L to 70L	$+\cdot25_{7}$
70L to 60L	$+\cdot85_{9}$
Weighted mean.....	$-\cdot50_{255}$

A further examination of the results of the pole stars was made to determine if a difference existed as to clamp and culmination.

Tables XVII gives these results and from these values it was concluded that no distinction need be made between observations at upper or lower culmination. Stars observed at upper and lower culmination were, therefore, combined without further correction.

TABLE XVII—$\Delta\delta$ (E–W)

Eichelberger Stars			$\Delta\delta$ Azimuth Stars	
Dec.	Upper	Lower	Mean Dec.	$\Delta\delta$ (E–W)
°	″	″	°	″
60	$-0\cdot56_{2}$	$+1\cdot27_{1}$	82	$-0\cdot33_{94}$
62	$-\cdot52_{6}$	$+\cdot94_{3}$	83	$-\cdot60_{30}$
63	$-\cdot13_{1}$	$+1\cdot59_{1}$	84	$-\cdot23_{22}$
65	$-\cdot93_{4}$	$-\cdot11_{1}$	85	$-\cdot31_{50}$
66	$-\cdot18_{4}$	$+\cdot74_{2}$	86	$-\cdot45_{46}$
68	$+\cdot92_{1}$	$+\cdot38_{1}$	87	$-\cdot40_{88}$
70	$-\cdot41_{3}$	$+\cdot88_{1}$	88	$-\cdot41_{54}$
72	$-\cdot55_{3}$	$+\cdot16_{1}$	89	$-\cdot17_{28}$
74	$-\cdot33_{3}$	$-\cdot54_{2}$	89L	$+\cdot43_{46}$
77	$-\cdot66_{1}$	$+\cdot98_{2}$	88L	$+\cdot08_{26}$
78	$-\cdot21_{1}$	$-\cdot50_{1}$	87L	$+\cdot12_{96}$
81	$-\cdot49_{6}$	$+\cdot73_{7}$	86L	$+\cdot48_{67}$
82	$-\cdot71_{2}$	$-\cdot22_{2}$	85L	$+\cdot50_{70}$
83	$-\cdot57_{12}$	$+\cdot26_{5}$	84L	$+\cdot44_{18}$
84	$-\cdot86_{6}$	$+\cdot15_{8}$	83L	$+\cdot39_{24}$
85	$-\cdot23_{1}$	$+1\cdot56_{1}$	82L	$+\cdot21_{66}$
86	$-\cdot09_{6}$	$+\cdot72_{4}$		
87	.....	$+\cdot71_{2}$		
Weighted mean	$-0\cdot50_{62}$	$+0\cdot49_{45}$	Weighted mean	$-0\cdot35_{830}$

Table XVIII is a summary of the results and gives the values as applied to reduce to a common clamp.

TABLE XVIII—SUMMARY $\Delta\delta$ (E–W)

Star Group	$\Delta\delta$ (E–W)
	″
Azimuth Stars.....	$-0\cdot35_{830}$
Clock Stars.....	$-0\cdot45_{2331}$
Eichelberger Stars.....	$-0\cdot50_{354}$

Adopted value $\Delta\delta$ (E-W) $= -0''.42$

$$\delta = \delta_e + 0''.21; \quad \delta = \delta_w - 0''.21$$

A solution was then made from the pole stars to determine a correction to the adopted latitude and refraction by use of equations of the form

$$2\,\Delta\varphi + \Delta R\,(\tan Z + \tan Z') = \delta' - \delta$$

The values given in Tables XIX and XX were for the individual stars, and Z, n, and δ apply to upper culmination, whereas ρ the weight was obtained using the formula $\frac{n + n'}{n\,n'}$, and v was the residual after $\Delta\,\varphi = 0''.11$ had been removed.

TABLE XIX—DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

Name	Z		Z′		Tan Z + Tan Z′	$\delta - \delta'$	n	n′	ρ	v
	°	′	°	′		″				″
λ U. Min.	43	38	45	34	1·973	+0·69	31	20	12	+0·47
α U. Min.	45	30	45	42	1·973	+ ·16	36	89	26	− ·06
Gr. 1119	43	27	45	45	1·974	+ ·30	44	78	28	+ ·08
Br. 1672	42	43	46	29	1·976	+ ·11	97	56	36	− ·11
Gr. 2283	42	7	47	5	1·980	+ ·50	123	51	36	+ ·28
51 H Ceph.	41	46	47	26	1·982	+ ·15	89	165	58	− ·07
39 H Ceph.	41	30	47	42	1·984	+ ·22	88	131	53	·00
Gr. 3548	41	20	47	52	1·985	+ ·26	55	45	25	+ ·04
δ U. Min.	41	13	47	59	1·986	+ ·16	104	56	36	− ·06
Gr. 642	41	1	48	11	1·988	+ ·33	66	128	44	+ ·11
43 H Ceph.	40	27	48	45	1·993	+ ·46	73	97	42	+ ·24
32 H. Ceph.	40	20	48	52	1·994	+ ·54	46	48	24	+ ·32
Gr. 750	39	58	49	15	1·999	+ ·04	72	89	40	− ·18
Gr. 944	39	46	49	26	2·000	+ ·03	87	168	57	− ·19
29 H Caml.	39	14	49	58	2·007	− ·10	49	27	17	− ·32
32 H Caml.	38	25	50	47	2·018	+ ·37	89	73	40	+ ·15
30 H Caml.	37	33	51	39	2·033	+ ·39	63	28	19	+ ·17
25 H Caml.	37	10	52	02	2·039	+ ·10	56	115	38	− ·12
76 Drac.	36	51	52	21	2·045	+ ·48	134	90	54	+ ·26
ε U. Min.	36	46	52	26	2·047	+ ·04	160	70	49	− ·18
1 H Drac.	36	16	52	56	2·058	+ ·16	91	105	49	− ·06

TABLE XX—DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

Name	Z		Z′		Tan Z + Tan Z′	δ − δ′	n	n′	ρ	v
	°	′	°	′		″				″
BD + 86°161	40	39	48	33	1·992	+0·18	12	7	4	−0·04
Gr. 1850	40	36	48	36	1·992	+ ·42	8	5	3	+ ·20
BD + 85°74	40	28	48	44	1·993	− ·10	7	4	2	− ·32
Br. 402	39	15	49	57	2·007	+ ·54	7	4	2	+ ·32
BD + 84°196	39	5	50	7	2·009	− ·53	4	8	3	− ·75
Gr 3212	39	3	50	9	2·009	− ·35	9	11	5	− ·57
36 H Ceph	38	33	50	39	2·017	+ ·33	9	6	4	+ ·11
Gr. 766	38	14	50	58	2·021	+ ·68	5	4	2	+ ·46
BD + 83°588	37	58	51	14	2·025	+ ·18	5	2	1	− ·04
Gr. 2315	37	47	51	25	2·028	−1·62	6	2	1	−1·84
Gr. 2063	37	43	51	29	2·029	+ ·51	5	6	3	+ ·29
Gr. 2196	37	25	51	47	2·035	− ·40	12	5	4	− ·62
V Ceph	37	22	51	50	2·036	+ ·18	7	6	3	− ·04
34 H Ceph	37	21	51	51	2·036	+ ·41	5	4	2	+ ·19
Gr. 1391	37	16	51	56	2·038	− ·32	9	7	4	− ·54
Br. 48	36	41	52	31	2·049	+ ·20	4	4	2	− ·02
Gr. 1782	36	08	53	04	2·060	+ ·55	5	4	2	+ ·33
Br. 344	35	44	53	28	2·069	− ·35	7	6	3	− ·57
Gr. 856	35	40	53	32	2·071	+ ·05	9	8	4	− ·17
Gr. 1977	35	28	53	44	2·075	− ·81	5	6	3	−1·03
Br. 1458	35	25	53	47	2·076	+ ·36	10	8	4	+ ·14
ζ U. Min	32	38	56	34	2·155	+ ·80	5	4	2	+ ·58
γ Ceph	31	49	57	23	2·183	+ ·77	3	11	2	+ ·55
β U. Min	29	04	60	08	2·297	− ·31	14	8	5	− ·53
γ U. Min	26	42	62	30	2·424	+ ·83	15	4	3	+ ·51
β Ceph	24	50	64	22	2.547	+ ·33	5	4	2	+ ·11
δ Drac	22	8	67	4	2·770	+1·48	4	4	2	+1·26
ι Ceph	20	24	68	48	2·950	+1·36	8	3	2	+1·14
36 Caml	20	20	68	52	2·958	− ·26	9	5	3	− ·48
α Drac	19	20	69	52	3·079	+ ·84	15	4	3	+ ·62
ε Cass	17	54	71	18	3·276	+ ·43	5	6	3	+ ·21
α Ceph	16	52	72	20	3·443	+ ·07	5	4	2	− ·15
α U. Maj	16	45	72	27	3·463	+ ·14	6	5	3	− ·08
η Drac	16	17	72	55	3·546	− ·23	17	4	3	− ·45
γ Cass	14	55	74	17	3·820	+ ·60	7	5	3	+ ·38

Due to the coefficients of the terms being nearly the same throughout the polar region, a value for Δ R was practically indeterminate. Table XXI shows the stars grouped in 10-degree intervals and the solution was made from these values.

TABLE XXI—$\Delta\delta$ (UPPER-LOWER)

Star Group	Weight	$\Delta\delta$ (U-L)
° °		″
60 to 70.....	24	+0·26
70 to 80.....	15	+ ·34
80 to 90.....	64	− ·12
Polars.....	781	+ ·21
Total.....	884	+_·22

Solution gave 2 $\Delta\varphi$ = +0 ″22

ΔR = (+ 0″005) (really indeterminate)

Correction to latitude $\Delta\varphi$ = − 0″11

RESULTS OF OBSERVATIONS
OF THE
SUN, MERCURY, AND VENUS
1923-1935

SUN AND PLANETS

The observations of the Sun, Mercury, and Venus were computed in the same manner as the stars. Additional corrections for parallax, motion, and defective illumination were applied where necessary.

The corrections for collimation, azimuth, and level were deduced from instrumental readings taken at the time of the observation, and the zenith distances were computed from a nadir taken just before or after the observation. Declinations were formed, using a latitude value of 45° 23′ 39″.00, corrected later by − 0″.11 deduced from the pole stars, and all the results were reduced to a common clamp.

SUN

When only one limb of the Sun was observed in declination, the semi-diameter of the American Ephemeris, corrected by the quantities given in Table XXII, was used to reduce to the centre. When both limbs were observed the mean was taken. For the right ascensions when one limb only was observed, the semi-diameter of the A.E., corrected by quantities based on Table XXIV, was used to reduce to the centre. When both limbs were observed the mean was taken. In solving for the equinox and equator correction, only results were used when both limbs had been taken.

As explained in the introduction, a correction to reduce from day to night observing was formed from the clock corrections taken in daylight and just after sunset. Table XXIII contains these values and the value − $0^s \cdot 010$ was applied to all the sun and planet transits to reduce them to a night basis. The positions of the same stars as determined by day and by night were also compared, resulting in $\alpha_n - \alpha_d = + 0^s \cdot 013$.

TABLE XXII—SEMI DIAMETER (DECLINATION OF SUN)

(Obs.—A E)

Year	Observer			
	C S	M	R M	H S
	″	″	″	″
1925	$-2 \cdot 2_{27}$	$-2 \cdot 8_{26}$	$-2 \cdot 4_{27}$	$-1 \cdot 8_{31}$
1926	$-2 \cdot 5_{16}$	$-2 \cdot 4_{16}$	$-2 \cdot 5_{21}$	$-2 \cdot 4_{21}$
1927	$-2 \cdot 9_{12}$	$-2 \cdot 5_{18}$	$-2 \cdot 8_{21}$	$-3 \cdot 2_{22}$
1928	$-2 \cdot 8_{21}$	$-2 \cdot 1_{26}$	$-2 \cdot 7_{25}$	$-2 \cdot 4_{18}$
1929	$-2 \cdot 3_{2}$	$-2 \cdot 1_{22}$	$-2 \cdot 4_{40}$	$-2 \cdot 6_{40}$
1930	$-2 \cdot 6_{29}$	$-2 \cdot 1_{26}$	$-1 \cdot 9_{38}$	$-0 \cdot 9_{37}$
1931	$-2 \cdot 6_{20}$	$-2 \cdot 3_{46}$	$-1 \cdot 7_{29}$	$-0 \cdot 5_{30}$
1932	$-2 \cdot 7_{22}$	$-2 \cdot 7_{44}$	$-2 \cdot 2_{34}$	$-0 \cdot 4_{15}$
1933	$-3 \cdot 2_{20}$	$-2 \cdot 5_{35}$	$-2 \cdot 2_{27}$	$-0 \cdot 4_{12}$
1934	$-4 \cdot 1_{8}$	$-3 \cdot 0_{37}$	$-2 \cdot 4_{30}$	$-0 \cdot 5_{38}$
1935	.....	$-2 \cdot 3_{13}$	$-2 \cdot 0_{13}$	$-0 \cdot 0_{3}$

A relative personal equation was obtained by joining means by months for each observer in each clamp and combining them into a simple mean by assigning weights by the formula $\frac{mn}{m + n}$.

Two tables XXV and XXVI were formed, one for comparison between the observers, and one for comparison with the mean of all observers.

Due to the smallness of these values as compared with the range in the observations, and since by investigation it did not materially affect the final result, no personal equation correction was applied.

A clamp difference was obtained by forming monthly values and assigning weights. These are given in Table XXVII, and the difference $\frac{1}{2}$ (W-E) = $-$ 0^s·013 was applied to reduce the observation to a common clamp.

After applying the clamp correction, a comparison of (observed—American Ephemeris) was made. This is given in Table XXVIII.

The probable error of the difference between the observed and the American Ephemeris was calculated.

p.e. for one observation ± 0^s·065
p.e. for the mean ± 0^s·002

TABLE XXIII—DAYLIGHT OBSERVATIONS

Year	ΔT Night - ΔT Day														
	C S			M			R M			H S			Total		
	No.	Total	ΔT′	No.	Total	ΔT′	No.	Total	ΔT′	No.	Total	ΔT′	No.	Total	ΔT′
		s	s		s	s		s	s		s	s		s	s
1924	17	−0·301	−0·018	6	−0·003	−0·000	10	+0·026	+0·003	23	−0·328	−0·014	56	−0·606	−0·011
1925	14	− ·336	− ·024	4	+ ·017	+ ·004	7	+ ·015	+ ·002	12	− ·025	− ·002	37	− ·329	− ·009
1926	7	− ·133	− ·019	9	− ·009	− ·001	6	− ·093	− ·015	8	− ·057	− ·007	30	− ·292	− ·010
1929	3	− ·105	− ·035	5	− ·287	− ·058	1	− ·067	− ·067	4	− ·148	− ·037	13	− ·609	− ·047
1930	7	− ·262	− ·037	8	+ ·237	+ ·030	.....	.....	.....	1	− ·071	− ·071	16	− ·096	− ·006
1931	.....	.....	.....	16	+ ·295	+ ·019	.....	.....	.....	1	− ·056	− ·056	17	+ ·239	+ ·014
1932	3	+ ·082	+ ·027	3	+ ·069	+ ·023	2	− ·206	− ·108	.....	.....	.....	8	− ·055	− ·007
1933	.....	.....	.....	4	− ·023	− ·006	2	+ ·031	+ ·016	.....	.....	.....	6	+ ·008	+ ·010
	51	−1·055	− ·021	56	+ ·294	+ ·005	28	− ·294	− ·018	49	− ·685	− ·014	183	−1·740	− ·010

ΔT night - ΔT day = −0·010^s

TABLE XXIV—S.T. OF SEMI-PASSAGE MERIDIAN OF SUN
(Obs.—A E)

Year	Observer			
	C S	M	R M	H S
	s	s	s	s
1924	$-0{\cdot}13_{27}$	$-0{\cdot}13_{26}$	$-0{\cdot}14_{30}$	$-0{\cdot}14_{14}$
1925	$-0{\cdot}13_{26}$	$-0{\cdot}15_{25}$	$-0{\cdot}13_{23}$	$-0{\cdot}16_{25}$
1926	$-0{\cdot}14_{14}$	$-0{\cdot}12_{17}$	$-0{\cdot}14_{27}$	$-0{\cdot}15_{12}$
1927	$-0{\cdot}13_{16}$	$-0{\cdot}14_{17}$	$-0{\cdot}17_{18}$	$-0{\cdot}16_{22}$
1928	$-0{\cdot}11_{12}$	$-0{\cdot}11_{26}$	$-0{\cdot}13_{25}$	$-0{\cdot}08_{18}$
1929	$-0{\cdot}11_{3}$	$-0{\cdot}10_{22}$	$-0{\cdot}10_{37}$	$-0{\cdot}09_{37}$
1930	$-0{\cdot}11_{26}$	$-0{\cdot}10_{22}$	$-0{\cdot}07_{32}$	$-0{\cdot}01_{24}$
1931	$-0{\cdot}17_{16}$	$-0{\cdot}16_{25}$	$-0{\cdot}06_{28}$	$-0{\cdot}01_{27}$
1932	$-0{\cdot}14_{15}$	$-0{\cdot}17_{42}$	$-0{\cdot}09_{23}$	$-0{\cdot}01_{14}$
1933	$-0{\cdot}19_{17}$	$-0{\cdot}13_{23}$	$-0{\cdot}10_{21}$	$+0{\cdot}01_{11}$
1934	.....	$-0{\cdot}16_{24}$	$-0{\cdot}11_{20}$	$+0{\cdot}02_{22}$
1935	.....	$-0{\cdot}11_{17}$	$-0{\cdot}08_{10}$	$+0{\cdot}03_{4}$

TABLE XXV—PERSONAL EQUATION—SUN

Observers	Differences		Weights		Observers	Differences		Weights	
	α	δ	α	δ		α	δ	α	δ
	s	″				s	″		
C S – M	+0·026	−0·28	120·0	119·7	M – R M	−0·045	+0·13	160·5	160·6
C S – R M	−0·015	−0·22	117·1	119·5	M – H S	−0·021	+0·10	140·4	145·4
C S – H S	+0·014	−0·20	105·2	106·0	R M – H S	+0·023	−0·06	134·6	139·1

TABLE XXVI—PERSONAL EQUATION—SUN

Observers	Differences		Weights		Observers	Differences		Weights	
	α	δ	α	δ		α	δ	α	δ
	s	″				s	″		
Av. – C S	−0·009	+0·16	167·5	169·4	Av. – R M	−0·020	+0·02	245·8	250·0
Av. – M	+0·022	−0·10	263·4	262·5	Av. – H S	+0·002	−0·02	209·9	210·6

TABLE XXVII—SUN Δα(W – E)

—	Without Personal Equation			With Personal Equation		
	Δα(W – E)	Wt		Δα(W – E)	Wt	
	s		s	s		s
January	−0·005	14·19	−0·071	−0·002	14·19	−0·028
February	− ·027	18·89	−0·510	− ·025	18·89	−0·472
March	− ·018	17·60	−0·317	− ·022	17·60	−0·387
April	− ·033	26·87	−0·887	− ·027	26·87	−0·726
May	− ·004	29·59	−0·118	− ·009	29·19	−0·263
June	− ·032	33·49	−1·072	− ·036	33·49	−1·206
July	− ·032	24·99	−0·800	− ·029	24·99	−0·725
August	+ ·003	22·72	+0·068	+ ·005	22·72	+0·114
September	− ·032	23·26	−0·744	− ·035	23·26	−0·814
October	− ·004	21·52	−0·086	− ·003	21·52	−0·065
November	− ·094	12·32	−1·158	− ·098	12·32	−1·207
December	− ·089	10·11	−0·901	− ·087	10·12	−0·880
	Mean = −0·026 s			Mean = −0·026 s		

A comparison of the declinations of the same stars observed during daylight and at night is given in Table XXIX. The Δδ (N-D) values for stars observed within three hours of the sun were assumed to be represented by a function Δ R tan Z. The daylight observations were few in number and no day to night correction was applied to the declinations of the Sun and the planets.

Table XXX gives the values from which the clamp corrections were deduced. The values used were

$$\delta_s = \delta_e + 0''.25; \quad \delta_s = \delta_w - 0''.25$$

TABLE XXVIII—$\Delta\alpha$ SUN (OBS.—A E)

Month	$\Delta\alpha$	No. of Obs.	
	s		s
January	+0·075	62	4·624
February	+0·071	81	5·783
March	+0·034	98	3·326
April	+0·039	119	4·608
May	+0·028	120	3·393
June	+0·023	134	3·102
July	+0·044	105	4·639
August	+0·048	134	6·468
September	+0·048	98	4·721
October	+0·069	87	5·981
November	+0·082	50	4·084
December	+0·085	42	3·560

Mean $\Delta\alpha = +0^s{\cdot}048 \pm {}^s{\cdot}002$

TABLE XXIX—$\Delta\delta$ (NIGHT—DAY) DECLINATIONS

Dec.	$\Delta\delta$(N–D)	ρ	Z	tan Z	ΔR tan Z	v
°	″		° ′		″	″
−15	+0·68	26	+60 24	1·760	0·62	+0·06
−10	+0·52	57	55 24	1·450	0·51	+ ·01
− 5	+0·43	29	50 24	1·209	0·42	+ ·01
0	+0·15	56	45 24	1·014	0·35	− ·20
+ 5	+0·39	95	40 24	·851	0·30	+ ·09
+10	+0·38	66	35 24	·711	0·25	+ ·13
+15	+0·18	66	30 24	·587	0·20	− ·02
+20	+0·04	52	25 24	·475	0·17	− ·13

ΔR = 0″35

TABLE XXX—CLAMP DIFFERENCES OF SUN IN DECLINATION (W–E)

Month	$\Delta\delta$(W–E)	Wt.	$\Delta\delta$(W–E) × Wt.
	″		″
January	0·29	19·51	5·66
February	·99	20·74	20·53
March	·72	18·51	13·33
April	·39	27·16	10·59
May	·45	31·15	14·02
June	·22	31·20	6·86
July	·39	31·18	12·16
August	·37	22·86	8·46
September	·65	19·04	12·38
October	·42	20·72	8·70
November	·93	11·52	10·71
December	·49	13·02	6·38

Weighted mean $\Delta\delta$ (W–E) = +0″49

Correction to the Equinox and Equator

A solution of the observed minus American Ephemeris residuals $\Delta\alpha_s$ and $\Delta\delta_s$ was made by first summarizing them into monthly values given in Table XXXI.

TABLE XXXI—MEAN CORRECTIONS TO THE A.E. RIGHT ASCENSIONS AND DECLINATIONS OF THE SUN

Month	$\Delta\alpha_s$	No. Obs.	$\Delta\delta_s$	No. Obs.
	s		″	
January	0·075	62	1·95	82
February	·071	81	1·69	91
March	·034	98	1·00	105
April	.039	119	0·73	115
May	·028	120	0·36	125
June	·023	134	0·19	125
July	·044	105	0·02	127
August	·048	134	0·07	112
September	·048	98	0·11	78
October	·069	87	0·22	83
November	·082	50	0·37	50
December	·085	42	1·46	53

Each monthly value gave rise to a conditional equation of the form

$$\Delta\alpha = -E + \cos\epsilon \sec^2\delta\,\Delta L - \cos\alpha \tan\delta\,\Delta\epsilon + 2\sin\alpha \sec\delta\,\Delta h - 2\cos\alpha \sec\delta \cos\epsilon\,\Delta k$$

$$\Delta\delta = -\Delta\delta_0 + \cos\alpha \sin\epsilon\,\Delta L + \sin\alpha\,\Delta\epsilon + 2\sin\delta\cos\alpha\,\Delta h - 2\cos^2\alpha\cos\delta\sin\epsilon\,\Delta k$$

Where E is the equinox correction

ΔL the correction to the tabular mean longitude of the sun

$\Delta\epsilon$ the correction to the tabular obliquity of the ecliptic

Δh and Δk the corrections to h, and k where $h = e\cos\pi$ and $k = e\sin\pi$, e and π being the eccentricity and longitude of perigee of the solar orbit, $\Delta\delta_0$ a constant error to the declinations in the neighbourhood of the equator.

EQUATIONS OF CONDITIONS (SUN)

					″	No. of obs.
January	− E	+1·054ΔL	+0·176Δε	−1·909Δh	−0·894Δk	=1·125	62
February		+0·964	+0·192	−1·062	−1·609	=1·065	81
March		+0·919	+0·037	−0·172	−1·829	=0·510	98
April		+0·945	−0·158	+0·805	−1·709	=0·585	119
May		+1·025	−0·210	+1·665	−1·194	=0·420	120
June		+1·088	−0·048	+2·164	−0·224	=0·345	134
July		+1·060	+0·164	+1·956	+0·818	=0·660	105
August		+0·975	+0·205	+1·191	+1·544	=0·720	134
September		+0·920	+0·053	+0·245	+1·824	=0·720	98
October		+0·938	−0·140	−0·698	+1·741	=1·035	87
November		+1·020	−0·213	−1·626	+1·232	=1·230	50
December		+1·087	−0·055	−2·160	+0·255	=1·275	42
January	− $\Delta\delta_0$	+0·181	−0·891	−0·328	−0·154	=1·95	82
February		+0·340	−0·518	−0·375	−0·568	=1·69	91
March		+0·396	−0·086	−0·074	−0·789	=1·00	105
April		+0·365	+0·397	+0·311	−0·661	=0·73	115
May		+0·245	+0·788	+0·398	−0·286	=0·36	125
June		+0·045	+0·994	+0·089	−0·009	=0·19	125
July		−0·165	+0·910	−0·304	−0·127	=0·02	127
August		−0·325	+0·578	−0·396	−0·514	=0·07	112
September		−0·395	+0·122	−0·103	−0·783	=0·11	78
October		−0·373	−0·345	+0·278	−0·693	=0·22	83
November		−0·253	−0·771	+0·404	−0·306	=0·37	50
December		−0·051	−0·992	+0·101	−0·012	=1·46	53

From these equations of condition the following normal equations were formed.

NORMAL EQUATIONS (SUN)

$$
\begin{array}{rrrrrrl}
 & & & & & & '' \\
11{\cdot}300E & & -\ 11{\cdot}251\Delta L & -\ 0{\cdot}044\Delta\epsilon & -\ 5{\cdot}206\Delta h & +\ 0{\cdot}462\Delta k & +\ 8{\cdot}138 = 0 \\
 & 11{\cdot}460\Delta\delta_0 & -\ 0{\cdot}310\Delta L & -\ 2{\cdot}092\Delta\epsilon & +\ 0{\cdot}144\Delta h & +\ 4{\cdot}682\Delta k & +\ 7{\cdot}046 = 0 \\
-\ 11{\cdot}251E & -\ 0{\cdot}310\Delta\delta_0 & +\ 12{\cdot}195\Delta L & -\ 0{\cdot}029\Delta\epsilon & +\ 5{\cdot}606\Delta h & -\ 0{\cdot}653\Delta k & -\ 9{\cdot}521 = 0 \\
-\ 0{\cdot}044E & -\ 2{\cdot}092\Delta\delta_0 & -\ 0{\cdot}027\Delta L & +\ 5{\cdot}716\Delta\epsilon & +\ 0{\cdot}058\Delta h & +\ 0{\cdot}161\Delta k & +\ 2{\cdot}149 = 0 \\
-\ 5{\cdot}206E & +\ 0{\cdot}144\Delta\delta_0 & +\ 5{\cdot}606\Delta L & +\ 0{\cdot}058\Delta\epsilon & +\ 24{\cdot}252\Delta h & +\ 0{\cdot}404\Delta k & +\ 0{\cdot}607 = 0 \\
+\ 0{\cdot}462E & +\ 4{\cdot}682\Delta\delta_0 & -\ 0{\cdot}652\Delta L & +\ 0{\cdot}161\Delta\epsilon & +\ 0{\cdot}404\Delta h & +\ 24{\cdot}516\Delta k & +\ 1{\cdot}960 = 0
\end{array}
$$

			Mean Errors
		''	''
E	=	+0·427	±0·29
$\Delta\delta_0$	=	−0·732	±0·04
ΔL	=	+1·259	±0·27
Δε	=	−0·640	±0·05
Δh	=	−0·220	±0·01
Δk	=	+0·091	±0·01

VENUS AND MERCURY

Observations of Venus and Mercury were reduced in the same manner as the stars, with additional corrections for motion, parallax, defective illumination and a day correction in right ascension. The declinations were reduced to a common clamp by using the same clamp correction as for the stars, $\delta = \delta_e + 0''.2$; $\delta = \delta_w - 0''.2$.

Residuals (Obs. − A.E.) in right ascension (Δ α) and declination (Δ δ) were formed, and analysed by the method of Hough (Cape Annals VIII, p. 19E).

Following this method the residuals were first transformed into longitude and latitude by the approximate formulae

$$\Delta\lambda = \Delta\alpha + \Delta\delta \sin\omega \cos\alpha$$
$$\Delta\beta = \Delta\delta - \Delta\alpha \sin\omega \cos\alpha$$

where ω is the obliquity.

The Venus residuals were then tabulated according to the argument (*l*-L) where *l* denotes the longitude of the planet and L that of the earth. These appear in Table XXXII, by separate limbs, at intervals of 30°. D is the reciprocal of the distance of the planet from the earth for the value of the argument shown. The subscripts show the number of observations.

TABLE XXXII—VENUS

l − L	Δλ			Δβ			D
	E	W	C	N	S	C	
°	''	''	''	''	''	''	
15	$-0{\cdot}81_{27}$	....	....	$-0{\cdot}71_{18}$	$+1{\cdot}30_{4}$	$+0{\cdot}75_{4}$	2·64
45	$+0{\cdot}67_{53}$	....	....	$-0{\cdot}24_{34}$	$+0{\cdot}18_{12}$	$+0{\cdot}57_{7}$	1·47
75	$+0{\cdot}76_{50}$	....	....	$-0{\cdot}50_{23}$	$+0{\cdot}15_{13}$	$+0{\cdot}88_{14}$	0·95
105	$+0{\cdot}57_{48}$	....	....	$-0{\cdot}42_{25}$	$+0{\cdot}39_{10}$	$+0{\cdot}77_{12}$	0·74
135	$+0{\cdot}51_{36}$	$+2{\cdot}20_{1}$	$+1{\cdot}90_{2}$	$+0{\cdot}11_{12}$	$+0{\cdot}26_{9}$	$+0{\cdot}09_{18}$	0·63
165	$-0{\cdot}89_{12}$	....	$+1{\cdot}55_{2}$	$-1{\cdot}95_{4}$	$-0{\cdot}93_{3}$	$+1{\cdot}13_{7}$	0·59
195	$-0{\cdot}35_{2}$	$+2{\cdot}20_{3}$	....	$-2{\cdot}90_{1}$	$-0{\cdot}40_{3}$	$+0{\cdot}20_{1}$	0·59
225	....	$+1{\cdot}03_{18}$	$+1{\cdot}30_{1}$	$-1{\cdot}12_{4}$	$-0{\cdot}68_{6}$	$-0{\cdot}29_{8}$	0·63
255	....	$+1{\cdot}05_{27}$	$-0{\cdot}10_{1}$	$-0{\cdot}22_{13}$	$-0{\cdot}34_{11}$	$+0{\cdot}74_{5}$	0·74
285	....	$+1{\cdot}41_{26}$	....	$+0{\cdot}91_{7}$	$+0{\cdot}31_{10}$	$+0{\cdot}19_{9}$	0·95
315	....	$+0{\cdot}71_{28}$	....	$-0{\cdot}94_{10}$	$+0{\cdot}91_{12}$	$+0{\cdot}80_{6}$	1·47
345	....	$-0{\cdot}37_{22}$	....	$-1{\cdot}23_{16}$	$+0{\cdot}80_{5}$	$+1{\cdot}10_{2}$	2·64

Equations of the form

$$\Delta\lambda = x_1 + y_1 \cos(l\text{-L}) + z_1 \operatorname{Sin}(l\text{-L}) \pm (W + Dd_1)$$
$$\Delta\beta = x_2 + y_2 \cos(l\text{-L}) + z_2 \operatorname{Sin}(l\text{-L}) \pm Dd_2$$

were assumed, where d is a supposed correction to the semi-diameter of the planet at unit distance from the earth, dependent upon the parallax, while W is a constant correction. The upper signs apply to the north and east limbs. The W term helps to represent the discontinuity in $\Delta\lambda$ at 0° and 180°.

A least square solution of the above equations, weighted according to the number of observations, and including observations on the centre of light, gave

$$\Delta\lambda = +\,''.69 - ''.43 \cos(l\text{-L}) + 1''.32 \operatorname{Sin}(l\text{-L}) \pm [-\,1''.77 + ''.47D]$$
$$(\pm\,\cdot14 \pm \cdot22 \qquad \pm\,\cdot60 \qquad \pm\,\cdot70 \pm \cdot26)$$

$$\Delta\beta = -\,''.02 + ''.19 \cos(l\text{-L}) + ''.08 \operatorname{Sin}(l\text{-L}) \pm ''.31\,D$$
$$(\pm\,\cdot07 \pm \cdot11 \qquad \pm\,\cdot09 \qquad \pm\,\cdot08)$$

(with mean errors shown)

The variable part of the expression for $\Delta\lambda$ was removed from the longitude residuals, leaving $\Delta\lambda'$. The residuals tabulated with arguments l and L are shown in Table XXXIII.

TABLE XXXIII—VENUS

Arg.	l			L		
	$\Delta\lambda'$	$\Delta\beta$	No.	$\Delta\lambda'$	$\Delta\beta$	No.
	″	″		″	″	
15	+0·61	+0·02	35	+1·42	−0·64	29
45	+1·06	−0·02	35	+0·42	−0·07	10
75	+0·90	+0·04	22	+1·07	+0·84	13
105	+0·90	−0·27	33	+1·04	+0·41	7
135	+1·25	+0·32	26	+0·17	+0·31	23
165	+0·23	+0·08	19	+0·42	+0·08	40
195	+0·23	+0·22	30	+0·26	−0·30	33
225	+0·68	+0·42	22	+0·51	−0·14	45
255	+0·33	−0·09	27	+0·86	−0·09	41
285	+0·33	+0·14	32	+0·88	+0·23	49
315	+0·28	−0·33	32	+0·41	−0·31	39
345	+0·93	−0·50	45	+0·84	+0·01	29

Another least square solution leads to their representation in the form

$$\Delta\lambda' = +\,''.67 + ''.11 \cos l + ''.34 \operatorname{Sin} l + ''.29 \cos L + ''.01 \operatorname{Sin} L$$
$$(\pm\,\cdot06 \pm \cdot11 \qquad \pm\,\cdot11 \qquad \pm\,\cdot12 \qquad \pm\,\cdot14)$$

$$\Delta\beta' = -\,''.01 - ''.24 \cos l + ''.00 \operatorname{Sin} l - ''.08 \cos L + ''.12 \operatorname{Sin} L$$
$$(\pm\,\cdot05 \pm \cdot10 \qquad \pm\,\cdot10 \qquad \pm\,\cdot14 \qquad \pm\,\cdot16)$$

Hough (Cape Annals VIII, parts IV, V) gives expressions for the coefficients of the terms in $\Delta\beta$, $\Delta\lambda$ dependent on the corrections which are sought. Equating the numerical values given above to these, results in the following corrections:

$$
\begin{aligned}
E &= -\ ''.04 \pm \cdot 35 \\
\Delta\,\delta_0 &= -\ ''.01 \pm \cdot 05 \\
\Delta\,L &= +\ ''.63 \pm \cdot 36 \\
\Delta\,\epsilon &= +\ ''.12 \pm \cdot 16 \\
\Delta\,h &= +\ ''.94 \pm \cdot 30 \\
\Delta\,k &= -\ ''.30 \pm \cdot 30
\end{aligned}
$$

The notation here is the same as that given for the Sun.

For the orbit of Venus itself,

$$
\begin{aligned}
\Delta\,h &= \quad 1''.72 \pm \cdot 56 \\
\Delta\,k &= -\ \ ''.29 \pm \cdot 56 \\
\Delta\,l &= +\ 1''.22 \pm \cdot 47
\end{aligned}
$$

The mean epoch is 1930·1.

The mean error of a single observation as deduced from the various curves fitted to the observations, ranges from $\pm$ 1''.3 to $\pm$ 1''.9. There is a well-marked personality in observations of the limbs, but corrections for this would make no significant change in the result. Application of corrections for retardation and fluctuation (Spencer Jones MN 99, 541) does not appreciably smooth the results; it adds an average of about $-$ 1''.0 to all the $\Delta\lambda$'s, and a negligible amount to the $\Delta\beta$'s.

MERCURY

Although the observations of Mercury are not numerous enough for a good solution, the residuals were treated in the same manner as those of Venus. They are shown in Tables XXXIV and XXXV, together with the results of the solution.

TABLE XXXIV—MERCURY

$l - L$	$\Delta\lambda$			$\Delta\beta$			D
	E	W	C	N	S	C	
°	"	"	"	"	"	"	
15	.....	.....	.....	.....	.....	.....	.....
45	$+1\cdot20_4$	$-0\cdot70_1$	.....	$-0\cdot25_2$	$+2\cdot20_2$	$-0\cdot20_1$	1·29
75	$+0\cdot78_{12}$	$-1\cdot60_1$	.....	$-0\cdot56_5$	$-1\cdot20_4$	$+0\cdot18_4$	1·03
105	$+0\cdot52_{21}$	.....	.....	$-0\cdot60_3$	$-1\cdot85_2$	$-0\cdot01_{16}$	·87
135	$+0\cdot34_{11}$	$+0\cdot55_2$	$+1\cdot10_1$	$-0\cdot40_4$	$+0\cdot37_7$	$+0\cdot07_3$	·77
165	$+1\cdot50_2$	.....	.....	.....	$+2\cdot40_1$	$-1\cdot20_1$	·73
195	.....	.....	.....	.....	.....	.....	.....
225	.....	$+3\cdot30_1$	.....	.....	.....	$-1\cdot00_1$	·77
255	.....	$+3\cdot50_3$	.....	.....	.....	$+0\cdot27_3$	·87
285	.....	$+0\cdot79_7$	.....	$-0\cdot50_2$	$+0\cdot60_1$	$-0\cdot08_4$	1·03
315	.....	$+0\cdot95_2$	.....	.....	.....	$+0\cdot40_2$	1·29
345	.....	.....	.....	.....	.....	.....	.....

$$\Delta\lambda = +\ 1''.11\ (\pm\cdot25) - 0''.20\ (\pm\cdot43)\cos(l - L) - 1''.29\ (\pm\cdot50)\sin(l - L) \pm [+''.67\ (\pm\cdot42)D]$$

$$\Delta\beta = -\ 0''.04\ (\pm\cdot17) + 0''.05\ (\pm\cdot38)\cos(l - L) - 0''.15\ (\pm\cdot25)\sin(l - L) \pm [-''.31\ (\pm\cdot26)D]$$

TABLE XXXV—MERCURY

Arg	l			L		
	$\Delta\lambda'$	$\Delta\beta$	No.	$\Delta\lambda'$	$\Delta\beta$	No.
°	″	″		″	″	
15	+0·38	−0·20	8	+0·77	−0·49	10
45	+1·60	−0·30	5	+3·60	−2·30	2
75	+0·88	+0·08	5	+2·20	−0·30	3
105	+1·04	−0·22	5	+0·94	+0·87	3
135	+1·27	−0·51	8	0·00	+0·90	2
165	+1·80	−0·10	7	+2·70	−0·10	1
195	+0·86	−0·32	9	+0·85	+0·40	2
225	+0·90	+0·05	2	+2·36	+0·16	5
255	+1·70	+2·00	1	+1·18	−0·10	17
285	+1·18	+0·42	6	+0·85	+0·05	11
315	+2·66	−0·30	5	+0·43	−0·40	4
345	+0·67	+0·10	7	+1·01	+0·05	8

$$\Delta\lambda = 1''.22\ (\pm\ \cdot 24) - 0''.13\ (\pm\ \cdot 25)\cos l - 0''.17\ (\pm\ \cdot 30)\sin l$$
$$- 0''.40\ (\pm\ \cdot 38)\cos \mathrm{L} + 0''.28\ (\pm\ \cdot 35)\sin \mathrm{L}$$

$$\Delta\beta = -\ 0''.04\ (\pm\ \cdot 17) + 0''.12\ (\pm\ \cdot 14)\cos l - 0''.26\ (\pm\ \cdot 16)\sin l$$
$$- 0''.40\ (\pm\ \cdot 25)\cos \mathrm{L} + 0''.00\ (\pm\ \cdot 23)\sin \mathrm{L}$$

These result in the corrections shown in Table XXXVI, synopsizing the corrections from observations of the sun and the two inner planets.

TABLE XXXVI—CORRECTION TO EQUINOX, EQUATOR, AND ORBITAL ELEMENTS

	Sun	Mercury	Venus
E	+0″.427 ± 0·29	+1″.08 ± 0·62	−0″.04 ± 0·35
$\Delta\delta_0$	−0″.732 ± 0·04	−0″.04 ± 0·17	−0″.01 ± 0·05
ΔL	+1″.259 ± 0·27	+2″.30 ± 0·67	+0″.63 ± 0·36
$\Delta\epsilon$	−0″.640 ± 0·05	+0″.05 ± 0·23	+0″.12 ± 0·16
Δh	−0″.220 ± 0·01		
Δk	+0″.091 ± 0·01		

The correction of 0″.73 to declinations in equatorial regions as deduced from the sun observations, seems to be large. The cause may be in the type of building in which the meridian circle is located or the manner of screening the instrument. While no direct sunlight fell on any part of the instrument except the objective, an additional screen near the south door and along the roof opening might have been advisable. The corrections to the equinox are comparable to those obtained by other observatories. The mean epoch for the values in Table XXXVI is 1930·0.

COMPARISONS WITH CATALOGUES

The position of each star in the FK3 and the G.C. in common with this catalogue was reduced to the equinox 1925·0, and the observations were reduced to 1925·0, by applying the proper motions as given by these catalogues. The differences 0 − FK3 and 0 − G.C. for each star compared are listed. These differences represent the corrections to FK3 and G.C. at the epoch of observation.

The individual differences 0 − FK3 and 0 − G.C. were collected into groups covering 3 hours of right ascension and 5 degrees of declination. In Tables XXXVII, XXXVIII, XXXIX, and XL the quantities $\Delta\alpha_\delta$ and $\Delta\delta_\delta$ represent weighted means taken over the 24 hours of right ascension, and have been subtracted from the means of the groups so as to permit the remainder of the tables to exhibit variation with right ascension.

The individual differences of right ascension for the zone 60° to 90° were multiplied by cos δ and collected into groups as described above, and the results are shown in Tables XLI and XLII.

TABLE XXXVII—DIFFERENCES OF RIGHT ASCENSION (0–FK3)

Decl.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$							
		0h to 3h	3h to 6h	6h to 9h	9h to 12h	12h to 15h	15h to 18h	18h to 21h	21h to 24h
° °	s	s	s	s	s	s	s	s	s
+90 to +85	$-\cdot073_{11}$	$-\cdot159_{2}$	$+\cdot027_{3}$	$-\cdot130_{1}$	$+\cdot207_{1}$	$-\cdot097_{1}$	$+0\cdot021_{1}$	$+\cdot331_{1}$	$-\cdot100_{1}$
+85 to +80	$+\cdot004_{14}$	$+\cdot023_{1}$	$-\cdot029_{1}$	$+\cdot010_{1}$	$-\cdot036_{2}$	$-\cdot106_{2}$	$+\cdot026_{2}$	$+\cdot044_{2}$	$+\cdot050_{2}$
+80 to +75	$+\cdot044_{2}$	.....	.....	.....	.....	.....	$+\cdot003_{1}$	.....	$-\cdot003_{1}$
+75 to +70	$-\cdot045_{3}$	.....	.....	.....	.....	$+\cdot019_{1}$	$+\cdot009_{1}$	.....	$-\cdot029_{1}$
+70 to +65	$-\cdot017_{5}$	.....	$+\cdot032_{1}$	$-\cdot037_{1}$	$-\cdot023_{1}$	.....	.....	$-\cdot001_{1}$	$+\cdot027_{1}$
+65 to +60	$-\cdot023_{9}$	$+\cdot003_{2}$	$+\cdot006_{1}$	.....	$-\cdot015_{2}$	$+\cdot027_{1}$	$-\cdot001_{2}$	.....	$-\cdot006_{1}$
+60 to +55	$+\cdot008_{10}$	$+\cdot016_{3}$	$+\cdot039_{1}$	$-\cdot001_{1}$	$-\cdot006_{2}$	$-\cdot026_{2}$	.....	.....	$-\cdot024_{1}$
+55 to +50	$-\cdot015_{13}$	$+\cdot013_{2}$	.....	.....	$+\cdot009_{2}$	$+\cdot034_{1}$	$-\cdot033_{2}$	$-\cdot002_{4}$	$-\cdot001_{2}$
+50 to +45	$-\cdot016_{21}$	$+\cdot042_{2}$	$+\cdot022_{4}$	$-\cdot024_{5}$	$+\cdot035_{1}$	$+\cdot004_{2}$	$-\cdot008_{4}$	$-\cdot038_{2}$	.....
+45 to +40	$-\cdot021_{19}$	$+\cdot001_{2}$	$+\cdot013_{3}$	$+\cdot013_{2}$	$-\cdot011_{3}$	$-\cdot007_{3}$	$-\cdot011_{1}$	$+\cdot001_{4}$	$+\cdot003_{1}$
+40 to +35	$-\cdot023_{16}$	$+\cdot008_{3}$	$+\cdot011_{2}$	$-\cdot003_{2}$	$-\cdot008_{1}$	$-\cdot018_{3}$	$-\cdot014_{1}$	$+\cdot010_{1}$	$+\cdot011_{3}$
+35 to +30	$-\cdot026_{16}$	$-\cdot012_{2}$	$-\cdot009_{3}$	.....	$+\cdot014_{3}$	$+\cdot011_{4}$	$-\cdot008_{1}$	$-\cdot007_{3}$	.....
+30 to +25	$-\cdot021_{22}$	$+\cdot013_{2}$	$+\cdot005_{3}$	$-\cdot016_{3}$	$-\cdot016_{2}$	$-\cdot002_{3}$	$-\cdot013_{2}$	$+\cdot008_{3}$	$+\cdot011_{4}$
+25 to +20	$-\cdot008_{23}$	$+\cdot008_{4}$	$+\cdot001_{4}$	$-\cdot004_{4}$	$-\cdot024_{2}$	$-\cdot022_{1}$	$+\cdot004_{3}$	000_{2}	$+\cdot010_{3}$
+20 to +15	$-\cdot011_{40}$	$-\cdot005_{5}$	$-\cdot001_{7}$	$-\cdot002_{4}$	$-\cdot004_{4}$	$-\cdot004_{6}$	$-\cdot003_{4}$	$+\cdot009_{5}$	$+\cdot012_{5}$
+15 to +10	$-\cdot006_{29}$	$+\cdot014_{2}$	$\cdot000_{3}$	$-\cdot007_{4}$	$-\cdot007_{6}$	$+\cdot001_{3}$	$-\cdot008_{3}$	$+\cdot011_{6}$	$+\cdot004_{2}$
+10 to + 5	$+\cdot003_{45}$	$+\cdot008_{7}$	$-\cdot010_{5}$	$-\cdot012_{8}$	$+\cdot001_{5}$	$+\cdot005_{4}$	000_{6}	$-\cdot005_{4}$	$+\cdot014_{6}$
+ 5 to 0	$+\cdot005_{32}$	$+\cdot008_{5}$	$-\cdot005_{2}$	$-\cdot012_{2}$	$+\cdot001_{4}$	$-\cdot011_{4}$	000_{8}	$+\cdot003_{4}$	$+\cdot007_{3}$
0 to − 5	$+\cdot005_{43}$	$+\cdot021_{3}$	$+\cdot001_{5}$	$-\cdot005_{7}$	$-\cdot007_{4}$	$-\cdot012_{5}$	$-\cdot008_{5}$	$+\cdot008_{7}$	$+\cdot006_{7}$
− 5 to −10	$+\cdot006_{41}$	$+\cdot007_{5}$	$-\cdot001_{3}$	$+\cdot006_{4}$	$-\cdot012_{3}$	$-\cdot007_{3}$	$-\cdot006_{3}$	$-\cdot003_{5}$	$+\cdot014_{5}$
−10 to −15	$-\cdot010_{34}$	$+\cdot010_{4}$	$-\cdot027_{3}$	$-\cdot012_{4}$	$+\cdot009_{5}$	$-\cdot001_{5}$	$+\cdot008_{4}$	$+\cdot014_{4}$	$-\cdot006_{4}$
−15 to −20	$-\cdot004_{34}$	$-\cdot002_{6}$	$+\cdot006_{3}$	$-\cdot007_{5}$	$-\cdot006_{2}$	$-\cdot003_{6}$	$-\cdot006_{3}$	$+\cdot006_{4}$	$+\cdot013_{5}$
−20 to −25	$-\cdot012_{25}$	$+\cdot012_{4}$	$+\cdot015_{3}$	$-\cdot006_{4}$	$-\cdot012_{2}$	$+\cdot003_{4}$	$-\cdot023_{3}$	$+\cdot014_{2}$	$-\cdot001_{3}$
−25 to −30	$-\cdot018_{30}$	$+\cdot003_{2}$	$-\cdot026_{2}$	$+\cdot009_{3}$	$+\cdot027_{3}$	$-\cdot001_{4}$	$-\cdot020_{6}$	$+\cdot006_{9}$	$+\cdot003_{1}$
Below −30	$-\cdot015_{5}$	.....	.....	$+\cdot009_{2}$	$-\cdot003_{1}$	.....	.....	$-\cdot008_{1}$	$-\cdot009_{1}$

TABLE XXXVIII—DIFFERENCES IN DECLINATION (0–FK3)

Decl.	$\Delta\delta_\delta$	$\Delta\delta_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	″	″	″	″	″	″	″	″	″
+90 to +85	$+\cdot02_{11}$	$+\cdot07_{2}$	$-\cdot11_{3}$	$-\cdot27_{1}$	$+\cdot04_{1}$	$+\cdot33_{1}$	$+\cdot02_{1}$	$+\cdot15_{1}$	$-\cdot07_{1}$
+85 to +80	$+\cdot07_{14}$	$+\cdot42_{1}$	$-\cdot25_{1}$	$-\cdot13_{1}$	$-\cdot13_{2}$	$-\cdot05_{2}$	$+\cdot21_{2}$	$-\cdot14_{3}$	$+\cdot13_{2}$
+80 to +75	$-\cdot22_{2}$	.....	.....	.....	.....	.....	$+\cdot21_{1}$	.....	$-\cdot22_{1}$
+75 to +70	$-\cdot13_{3}$	.....	.....	.....	.....	$-\cdot22_{1}$	$+\cdot06_{1}$	.....	$+\cdot17_{1}$
+70 to +65	$-\cdot07_{5}$	.....	$+\cdot10_{1}$	$-\cdot18_{1}$	$+\cdot23_{1}$	.....	.....	$-\cdot23_{1}$	$+\cdot06_{1}$
+65 to +60	$+\cdot25_{9}$	$+\cdot05_{2}$	$-\cdot07_{1}$	.....	$+\cdot05_{2}$	$-\cdot40_{1}$	$-\cdot07_{2}$	.....	$+\cdot41_{1}$
+60 to +55	$+\cdot13_{10}$	$+\cdot03_{3}$	$-\cdot16_{1}$	$-\cdot47_{1}$	$+\cdot01_{2}$	$+\cdot13_{2}$	.....	.....	$+\cdot28_{1}$
+55 to +50	$+\cdot20_{13}$	$-\cdot21_{2}$	.....	.....	$-\cdot02_{2}$	$-\cdot14_{1}$	$-\cdot33_{2}$	$+\cdot17_{4}$	$+\cdot32_{2}$
+50 to +45	$+\cdot11_{21}$	$-\cdot01_{2}$	$-\cdot07_{4}$	$-\cdot10_{5}$	$-\cdot20_{1}$	$+\cdot05_{3}$	$-\cdot01_{4}$	$+\cdot13_{2}$	.....
+45 to +40	$+\cdot20_{19}$	$+\cdot12_{2}$	$+\cdot11_{3}$	$-\cdot01_{2}$	$-\cdot13_{3}$	$-\cdot15_{3}$	$+\cdot14_{1}$	$+\cdot02_{4}$	$+\cdot16_{1}$
+40 to +35	$+\cdot32_{16}$	$+\cdot21_{3}$	$+\cdot14_{2}$	$-\cdot37_{2}$	$+\cdot46_{1}$	$-\cdot14_{3}$	$-\cdot11_{1}$	$+\cdot12_{1}$	$-\cdot10_{3}$
+35 to +30	$+\cdot02_{16}$	$-\cdot17_{2}$	$+\cdot47_{3}$	.....	$+\cdot19_{3}$	$-\cdot26_{4}$	$-\cdot20_{1}$	$-\cdot15_{3}$	.....
+30 to +25	$+\cdot14_{22}$	$+\cdot02_{2}$	$+\cdot03_{3}$	$-\cdot27_{3}$	$-\cdot10_{2}$	$+\cdot04_{3}$	$-\cdot02_{2}$	$+\cdot20_{3}$	$+\cdot06_{4}$
+25 to +20	$+\cdot02_{23}$	$+\cdot06_{4}$	$+\cdot06_{4}$	$-\cdot02_{4}$	$-\cdot20_{2}$	$-\cdot37_{1}$	$+\cdot13_{3}$	$+\cdot12_{2}$	$-\cdot11_{3}$
+20 to +15	$+\cdot07_{40}$	$+\cdot02_{5}$	$-\cdot02_{7}$	$-\cdot14_{4}$	$-\cdot15_{4}$	$-\cdot04_{6}$	$+\cdot17_{4}$	$+\cdot07_{5}$	$+\cdot06_{5}$
+15 to +10	$+\cdot16_{28}$	$-\cdot15_{2}$	$+\cdot07_{2}$	$+\cdot10_{4}$	$-\cdot07_{6}$	00_{3}	$+\cdot04_{3}$	$+\cdot03_{6}$	$-\cdot12_{2}$
+10 to + 5	$+\cdot19_{45}$	$-\cdot01_{7}$	$+\cdot04_{5}$	$+\cdot11_{3}$	00_{5}	$-\cdot36_{4}$	$+\cdot03_{6}$	$+\cdot15_{4}$	$-\cdot02_{6}$
+ 5 to 0	$+\cdot23_{32}$	$+\cdot01_{5}$	$+\cdot12_{2}$	$+\cdot23_{2}$	$-\cdot14_{4}$	$+\cdot02_{4}$	$+\cdot01_{3}$	$+\cdot01_{4}$	$-\cdot12_{3}$
0 to − 5	$+\cdot19_{43}$	$-\cdot29_{3}$	$-\cdot07_{5}$	$-\cdot14_{7}$	$+\cdot13_{4}$	$+\cdot02_{5}$	$+\cdot30_{5}$	$+\cdot12_{7}$	$-\cdot11_{7}$
− 5 to −10	$+\cdot28_{41}$	$-\cdot11_{5}$	$-\cdot15_{3}$	$-\cdot18_{4}$	$+\cdot24_{3}$	$-\cdot10_{3}$	$+\cdot39_{3}$	$+\cdot31_{5}$	$-\cdot01_{5}$
−10 to −15	$+\cdot39_{34}$	$-\cdot19_{4}$	$+\cdot07_{3}$	$+\cdot04_{4}$	$-\cdot09_{5}$	$-\cdot17_{6}$	$+\cdot12_{4}$	$+\cdot25_{4}$	$+\cdot10_{4}$
−15 to −20	$+\cdot50_{34}$	$-\cdot14_{6}$	$-\cdot46_{3}$	$+\cdot18_{3}$	$-\cdot38_{2}$	$+\cdot13_{6}$	$+\cdot56_{3}$	00_{4}	$-\cdot11_{5}$
−20 to −25	$+\cdot40_{25}$	$-\cdot07_{4}$	$-\cdot36_{3}$	$-\cdot11_{4}$	$-\cdot09_{2}$	$+\cdot04_{4}$	$+\cdot13_{3}$	$-\cdot04_{2}$	$+\cdot53_{3}$
−25 to −30	$+\cdot59_{30}$	$-\cdot78_{2}$	$-\cdot18_{2}$	$-\cdot40_{3}$	$-\cdot15_{3}$	$-\cdot36_{4}$	$+\cdot17_{6}$	$+\cdot46_{9}$	$-\cdot03_{1}$
Below −30	$+\cdot53_{3}$	.....	.....	$-\cdot27_{3}$	$+\cdot39_{1}$	.....	.....	$+\cdot15_{1}$	$-\cdot01_{1}$

TABLE XXXIX—DIFFERENCES IN DECLINATION (0–G.C.)

Decl.	$\Delta\delta_\delta$	$\Delta\delta_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	″	″	″	″	″	″	″	″	″
+90 to +85	$-\cdot03_{10}$	$+\cdot04_{2}$	$-\cdot08_{5}$	$-\cdot20_{3}$	$+\cdot15_{1}$	$+\cdot19_{2}$	$+\cdot19_{2}$	$+\cdot20_{1}$	$-\cdot03_{3}$
+85 to +80	$\cdot00_{29}$	$+\cdot09_{4}$	$-\cdot20_{3}$	$-\cdot10_{5}$	$-\cdot02_{7}$	$-\cdot20_{6}$	$+\cdot13_{5}$	$+\cdot12_{6}$	$+\cdot26_{3}$
+80 to +75	$+\cdot04_{20}$	$+\cdot28_{2}$	$-\cdot18_{2}$	$-\cdot07_{2}$	$-\cdot19_{2}$	$+\cdot03_{1}$	$+\cdot10_{5}$	$+\cdot18_{3}$	$-\cdot25_{3}$
+75 to +70	$-\cdot01_{19}$	00_{1}	00_{3}	$-\cdot38_{3}$	$+\cdot06_{3}$	$+\cdot17_{3}$	$-\cdot04_{3}$	$-\cdot01_{1}$	$+\cdot32_{2}$
+70 to +65	$+\cdot09_{28}$	$+\cdot02_{4}$	$-\cdot21_{3}$	$-\cdot15_{3}$	$+\cdot31_{4}$	$-\cdot36_{3}$	$+\cdot09_{2}$	$+\cdot16_{4}$	$-\cdot01_{5}$
+65 to +60	$+\cdot30_{28}$	$-\cdot02_{7}$	$-\cdot07_{4}$	$-\cdot14_{3}$	$+\cdot12_{5}$	$-\cdot14_{4}$	$+\cdot13_{6}$	$-\cdot20_{4}$	$+\cdot16_{5}$
+60 to +55	$+\cdot26_{49}$	$+\cdot17_{9}$	$-\cdot25_{5}$	$-\cdot22_{6}$	$-\cdot03_{7}$	$-\cdot06_{6}$	$+\cdot12_{5}$	$+\cdot10_{5}$	$+\cdot04_{6}$
+55 to +50	$+\cdot26_{52}$	$-\cdot11_{6}$	$-\cdot05_{6}$	$-\cdot34_{5}$	$-\cdot02_{6}$	$-\cdot09_{6}$	$+\cdot06_{8}$	$+\cdot20_{7}$	$+\cdot15_{3}$
+50 to +45	$+\cdot28_{57}$	$-\cdot02_{6}$	$-\cdot02_{8}$	$-\cdot13_{9}$	$+\cdot02_{5}$	$+\cdot06_{8}$	$+\cdot16_{8}$	$-\cdot08_{9}$	$+\cdot08_{4}$
+45 to +40	$+\cdot18_{61}$	$+\cdot09_{10}$	$-\cdot12_{10}$	$+\cdot02_{4}$	$-\cdot04_{9}$	$-\cdot16_{8}$	$+\cdot23_{4}$	$+\cdot08_{10}$	$+\cdot04_{6}$
+40 to +35	$+\cdot30_{62}$	$+\cdot04_{9}$	$-\cdot04_{9}$	$-\cdot08_{7}$	$-\cdot01_{6}$	$-\cdot15_{9}$	$+\cdot22_{6}$	$+\cdot07_{7}$	$+\cdot05_{9}$
+35 to +30	$+\cdot19_{62}$	$-\cdot08_{7}$	$+\cdot03_{8}$	$-\cdot10_{7}$	$+\cdot14_{8}$	$-\cdot19_{8}$	$+\cdot04_{10}$	$+\cdot03_{9}$	$+\cdot15_{5}$
+30 to +25	$+\cdot14_{80}$	$+\cdot06_{9}$	$+\cdot02_{8}$	$-\cdot17_{11}$	$-\cdot09_{9}$	$-\cdot05_{12}$	$+\cdot03_{11}$	$+\cdot13_{9}$	$+\cdot12_{11}$
+25 to +20	$+\cdot15_{82}$	$-\cdot11_{10}$	$-\cdot10_{13}$	$-\cdot09_{12}$	$+\cdot04_{11}$	$-\cdot01_{9}$	$+\cdot16_{9}$	$+\cdot23_{10}$	$-\cdot04_{9}$
+20 to +15	$+\cdot22_{84}$	$-\cdot09_{8}$	$-\cdot11_{11}$	$-\cdot13_{10}$	$-\cdot17_{12}$	$-\cdot01_{12}$	$+\cdot30_{12}$	$+\cdot12_{10}$	$+\cdot06_{9}$
+15 to +10	$+\cdot24_{94}$	$-\cdot10_{12}$	$-\cdot06_{11}$	$-\cdot03_{14}$	$-\cdot01_{13}$	$+\cdot04_{9}$	$+\cdot09_{11}$	$+\cdot05_{15}$	$+\cdot07_{9}$
+10 to + 5	$+\cdot31_{103}$	$-\cdot02_{14}$	$-\cdot08_{14}$	$+\cdot05_{15}$	$-\cdot07_{12}$	$-\cdot14_{11}$	$+\cdot21_{11}$	$+\cdot09_{12}$	$+\cdot01_{14}$
+ 5 to 0	$+\cdot32_{83}$	$-\cdot05_{10}$	$-\cdot22_{9}$	$-\cdot11_{9}$	$-\cdot07_{10}$	$+\cdot08_{10}$	$+\cdot17_{12}$	$+\cdot11_{11}$	$+\cdot03_{12}$
0 to − 5	$+\cdot29_{93}$	$-\cdot21_{11}$	$-\cdot05_{12}$	$-\cdot11_{14}$	$+\cdot06_{9}$	$-\cdot03_{11}$	$+\cdot22_{11}$	$+\cdot12_{11}$	$+\cdot01_{14}$
− 5 to −10	$+\cdot29_{92}$	$-\cdot18_{10}$	$-\cdot14_{14}$	$-\cdot19_{11}$	$+\cdot06_{8}$	$+\cdot02_{16}$	$+\cdot18_{12}$	$+\cdot27_{10}$	$+\cdot01_{11}$
−10 to −15	$+\cdot45_{83}$	$+\cdot02_{10}$	$-\cdot22_{11}$	$-\cdot02_{10}$	$-\cdot11_{11}$	$-\cdot14_{11}$	$+\cdot25_{10}$	$+\cdot11_{11}$	$+\cdot20_{9}$
−15 to −20	$+\cdot51_{85}$	$-\cdot09_{11}$	$-\cdot35_{10}$	$-\cdot12_{12}$	$+\cdot03_{9}$	$+\cdot03_{12}$	$+\cdot41_{9}$	$+\cdot15_{9}$	00_{13}
−20 to −25	$+\cdot55_{79}$	$-\cdot28_{8}$	$-\cdot23_{11}$	$-\cdot07_{11}$	$-\cdot24_{7}$	$-\cdot04_{11}$	$+\cdot37_{11}$	$+\cdot17_{11}$	$+\cdot15_{9}$
−25 to −30	$+\cdot73_{91}$	$-\cdot43_{9}$	$-\cdot03_{1}$	$-\cdot38_{11}$	$-\cdot23_{10}$	$-\cdot41_{9}$	$+\cdot27_{15}$	$+\cdot39_{10}$	$+\cdot26_{10}$
Below −30	$+\cdot56_{7}$	.....	.....	$-\cdot14_{2}$	$+\cdot65_{1}$	$-\cdot42_{2}$	.....	$+\cdot37_{1}$	$+\cdot07_{1}$

TABLE XL—DIFFERENCES IN RIGHT ASCENSION (0–G.C.)

Decl.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	s	s	s	s	s	s	s	s	s
+90 to +85	$-\cdot102_{19}$	$-\cdot042_{2}$	$+\cdot105_{5}$	$+\cdot003_{3}$	$+\cdot073_{1}$	$+\cdot131_{2}$	$-\cdot174_{2}$	$-\cdot062_{1}$	$-\cdot122_{3}$
+85 to +80	$-\cdot006_{29}$	$+\cdot035_{4}$	$+\cdot118_{3}$	$-\cdot023_{5}$	$-\cdot021_{7}$	$-\cdot047_{6}$	$-\cdot038_{5}$	$-\cdot007_{6}$	$+\cdot089_{3}$
+80 to +75	$-\cdot026_{20}$	$+\cdot044_{2}$	$+\cdot032_{2}$	$-\cdot008_{2}$	$+\cdot018_{2}$	$-\cdot005_{1}$	$-\cdot063_{5}$	$+\cdot041_{3}$	$+\cdot008_{3}$
+75 to +70	$-\cdot069_{19}$	$-\cdot030_{1}$	$+\cdot029_{3}$	$+\cdot003_{3}$	$+\cdot003_{3}$	$-\cdot005_{3}$	$-\cdot001_{3}$	$-\cdot044_{1}$	$-\cdot003_{2}$
+70 to +65	$-\cdot069_{28}$	$+\cdot024_{4}$	$+\cdot008_{3}$	$-\cdot022_{3}$	$-\cdot016_{4}$	$+\cdot007_{3}$	$-\cdot053_{2}$	$-\cdot005_{4}$	$+\cdot026_{5}$
+65 to +60	$-\cdot056_{38}$	$+\cdot031_{7}$	$-\cdot051_{4}$	$-\cdot003_{3}$	$+\cdot001_{5}$	$+\cdot010_{4}$	$+\cdot004_{6}$	$+\cdot002_{4}$	$-\cdot014_{5}$
+60 to +55	$-\cdot028_{49}$	$+\cdot017_{9}$	$\cdot000_{5}$	$-\cdot019_{6}$	$+\cdot019_{7}$	$+\cdot002_{6}$	$-\cdot030_{5}$	$+\cdot016_{5}$	$+\cdot028_{6}$
+55 to +50	$-\cdot024_{52}$	$+\cdot028_{6}$	$+\cdot006_{6}$	$-\cdot019_{5}$	$-\cdot006_{6}$	$+\cdot002_{6}$	$-\cdot027_{3}$	$-\cdot007_{7}$	$+\cdot023_{3}$
+50 to +45	$-\cdot033_{57}$	$+\cdot030_{6}$	$+\cdot037_{3}$	$-\cdot022_{9}$	$-\cdot001_{5}$	$-\cdot002_{3}$	$-\cdot012_{3}$	$-\cdot012_{9}$	$-\cdot009_{4}$
+45 to +40	$-\cdot035_{61}$	$+\cdot014_{10}$	$-\cdot002_{10}$	$-\cdot012_{4}$	$-\cdot007_{9}$	$-\cdot013_{3}$	$-\cdot013_{4}$	$+\cdot009_{10}$	$+\cdot011_{6}$
+40 to +35	$-\cdot041_{63}$	$+\cdot018_{9}$	$+\cdot011_{9}$	$-\cdot022_{7}$	$-\cdot017_{7}$	$-\cdot005_{9}$	$-\cdot017_{6}$	$-\cdot002_{7}$	$+\cdot020_{9}$
+35 to +30	$-\cdot034_{61}$	$+\cdot016_{7}$	$-\cdot003_{8}$	$-\cdot016_{7}$	$+\cdot004_{7}$	$\cdot000_{8}$	$-\cdot016_{10}$	$-\cdot003_{9}$	$+\cdot031_{5}$
+30 to +25	$-\cdot029_{80}$	$+\cdot026_{9}$	$-\cdot009_{8}$	$-\cdot019_{11}$	$-\cdot019_{9}$	$-\cdot006_{12}$	$-\cdot004_{11}$	$+\cdot007_{9}$	$+\cdot023_{11}$
+25 to +20	$-\cdot024_{83}$	$+\cdot018_{10}$	$-\cdot005_{13}$	$-\cdot009_{12}$	$-\cdot015_{11}$	$-\cdot002_{9}$	$-\cdot006_{9}$	$+\cdot006_{10}$	$+\cdot021_{9}$
+20 to +15	$-\cdot022_{84}$	$+\cdot014_{8}$	$-\cdot010_{11}$	$-\cdot015_{10}$	$-\cdot005_{12}$	$-\cdot009_{12}$	$-\cdot004_{12}$	$+\cdot015_{10}$	$+\cdot028_{9}$
+15 to +10	$-\cdot010_{94}$	$+\cdot010_{12}$	$-\cdot006_{11}$	$-\cdot021_{14}$	$-\cdot012_{13}$	$-\cdot004_{9}$	$\cdot000_{11}$	$+\cdot012_{15}$	$+\cdot026_{9}$
+10 to + 5	$-\cdot007_{103}$	$+\cdot017_{14}$	$-\cdot020_{14}$	$-\cdot020_{15}$	$-\cdot008_{12}$	$+\cdot002_{11}$	$-\cdot007_{11}$	$+\cdot007_{12}$	$+\cdot028_{14}$
+ 5 to 0	$\cdot000_{82}$	$+\cdot013_{10}$	$-\cdot008_{9}$	$-\cdot024_{9}$	$-\cdot017_{10}$	$-\cdot011_{10}$	$+\cdot003_{12}$	$+\cdot010_{11}$	$+\cdot024_{12}$
0 to − 5	$\cdot000_{92}$	$+\cdot023_{11}$	$-\cdot010_{12}$	$-\cdot022_{14}$	$-\cdot012_{9}$	$-\cdot013_{11}$	$+\cdot001_{11}$	$+\cdot013_{11}$	$+\cdot020_{14}$
− 5 to −10	$-\cdot005_{92}$	$+\cdot020_{10}$	$-\cdot018_{14}$	$-\cdot012_{11}$	$-\cdot023_{8}$	$-\cdot019_{16}$	$+\cdot005_{12}$	$+\cdot011_{10}$	$+\cdot032_{11}$
−10 to −15	$-\cdot011_{84}$	$+\cdot010_{10}$	$-\cdot006_{11}$	$-\cdot015_{10}$	$-\cdot007_{11}$	$-\cdot003_{12}$	$-\cdot001_{10}$	$+\cdot013_{11}$	$+\cdot011_{9}$
−15 to −20	$-\cdot016_{84}$	$+\cdot009_{11}$	$-\cdot012_{10}$	$-\cdot012_{12}$	$-\cdot020_{9}$	$\cdot000_{11}$	$-\cdot001_{9}$	$+\cdot014_{9}$	$+\cdot019_{13}$
−20 to −25	$-\cdot015_{79}$	$+\cdot018_{8}$	$-\cdot001_{11}$	$-\cdot014_{11}$	$-\cdot014_{7}$	$-\cdot019_{11}$	$-\cdot003_{11}$	$+\cdot012_{11}$	$+\cdot028_{9}$
−25 to −30	$-\cdot022_{91}$	$+\cdot015_{9}$	$-\cdot016_{8}$	$-\cdot020_{11}$	$+\cdot005_{10}$	$-\cdot002_{9}$	$-\cdot009_{15}$	$+\cdot014_{19}$	$+\cdot005_{10}$
Below −30	$-\cdot023_{7}$	.....	.....	$-\cdot002_{2}$	$-\cdot014_{1}$	$+\cdot011_{2}$	.....	$-\cdot014_{1}$	$+\cdot009_{1}$

TABLE XLI—$\Delta\alpha$ COS δ (0–FK3)

Decl.	$\Delta\alpha\delta$ Cos δ	$\Delta\alpha_\alpha$ Cos δ Unit 0·000 s							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °									
+90 to +85	$-\cdot004_{11}$	$-\cdot002_{2}$	$-\cdot000_{2}$	$-\cdot006_{1}$	$+\cdot013_{1}$	$-\cdot008_{1}$	$+\cdot001_{1}$	$+\cdot008_{1}$	$-\cdot009_{1}$
+85 to +80	$\cdot000_{14}$	$+\cdot003_{1}$	$-\cdot002_{1}$	$+\cdot001_{1}$	$-\cdot004_{2}$	$-\cdot012_{2}$	$+\cdot004_{2}$	$+\cdot005_{2}$	$+\cdot007_{2}$
+80 to +75	$+\cdot010_{2}$	.....	.....	.....	.....	.....	$\cdot000_{1}$	.....	$-\cdot001_{1}$
+75 to +70	$-\cdot014_{3}$	.....	.....	.....	.....	$+\cdot007_{1}$	$+\cdot003_{1}$	.....	$-\cdot011_{1}$
+70 to +65	$-\cdot007_{5}$	.....	$+\cdot012_{1}$	$-\cdot015_{1}$	$-\cdot007_{1}$	.....	.....	$\cdot000_{1}$	$+\cdot011_{1}$
+65 to +60	$-\cdot011_{9}$	$+\cdot001_{2}$	$+\cdot004_{1}$	.....	$-\cdot007_{2}$	$+\cdot013_{1}$	$\cdot000_{2}$	.....	$-\cdot003_{1}$

TABLE XLII—$\Delta\alpha$ COS δ (0–GC)

Decl.	$\Delta\alpha\delta$ Cos δ	$\Delta\alpha_\alpha$ Cos δ Unit 0·000 s							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °									
+90 to +85	$-\cdot005_{19}$	$+\cdot001_{2}$	$+\cdot005_{5}$	$\cdot000_{2}$	$+\cdot003_{1}$	$+\cdot004_{2}$	$-\cdot009_{2}$	$+\cdot002_{1}$	$-\cdot009_{3}$
+85 to +80	$-\cdot001_{29}$	$+\cdot004_{4}$	$+\cdot013_{5}$	$-\cdot003_{5}$	$-\cdot003_{7}$	$-\cdot005_{6}$	$-\cdot005_{5}$	$-\cdot001_{6}$	$+\cdot011_{3}$
+80 to +75	$-\cdot006_{20}$	$+\cdot010_{2}$	$+\cdot007_{2}$	$-\cdot001_{2}$	$+\cdot004_{2}$	$-\cdot002_{1}$	$-\cdot014_{5}$	$+\cdot010_{3}$	$+\cdot002_{3}$
+75 to +70	$-\cdot021_{19}$	$-\cdot009_{1}$	$+\cdot009_{3}$	$\cdot000_{3}$	$+\cdot002_{3}$	$\cdot000_{3}$	$\cdot000_{3}$	$-\cdot016_{1}$	$-\cdot002_{2}$
+70 to +65	$-\cdot027_{28}$	$+\cdot011_{4}$	$+\cdot003_{3}$	$-\cdot011_{3}$	$-\cdot006_{4}$	$+\cdot003_{3}$	$-\cdot021_{2}$	$-\cdot001_{4}$	$+\cdot010_{5}$
+65 to +60	$-\cdot026_{38}$	$+\cdot014_{7}$	$-\cdot023_{4}$	$-\cdot002_{3}$	$\cdot000_{5}$	$+\cdot006_{4}$	$+\cdot002_{6}$	$+\cdot001_{4}$	$-\cdot006_{5}$
Mean	.....	$+\cdot009_{20}$	$+\cdot001_{21}$	$-\cdot003_{19}$	$-\cdot001_{22}$	$\cdot000_{19}$	$-\cdot006_{23}$	$+\cdot001_{15}$	$+\cdot001_{21}$

The following pages give the final observed right ascensions and declinations of the Sun, Mercury, and Venus, and the corresponding corrections to the American Ephemeris. The observations have not been corrected for equinox and equator. For the manner in which they were computed see page. (101).

SUN

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
1924													
Jan.	7·5	CS	E	.....	19	10		.....	.....	−22	28	6·3	+4·4
	14·5	RM	E	W	19	40	31·72	+0·04	.....	−21	26		.....
	18·5	M	E	.....	19	57	4·98	+0·01	.....	−20	42		.....
	21·5	M	E	.....	20	10		.....	.....	−20	4	0·9	+6·0
	23·5	CS	E	.....	20	19		.....	.....	−19	37	11·8	−0·6
	24·5	CS	E	.....	20	23		.....	.....	−19	23	8·4	+1·9
	31·5	M	E	.....	20	52		.....	.....	−17	35	21·6	+3·1
Feb.	7·5	M	E	.....	21	21		.....	.....	−15	32	20·0	−0·1
	8·5	CS	E	.....	21	24	30·34	+0·26	.....	−15	13	38·3	−0·0
	14·5	HS	E	.....	21	48		.....	.....	−13	16	19·1	+0·2
	18·5	CS	E	.....	22	3	46·24	+0·05	.....	−11	54		.....
	19·5	M	E	.....	22	7	37·59	−0·11	.....	−11	32	31·2	+3·9
	21·5	RM	E	.....	22	15		.....	.....	−10	49	42·7	+4·1
	22·5	CS	E	.....	22	19	8·05	−0·06	.....	−10	28		.....
	23·5	RM	E	.....	22	22	56·97	+0·00	.....	−10	6	14·6	+3·6
	25·5	RM	E	.....	22	30	32·62	−0·20	.....	− 9	2	9·8	+2·6
	26·5	CS	E	.....	22	34	19·98	−0·04	.....	− 9	0		.....
	29·5	RM	E	W	22	45	37·63	−0·22	.....	− 7	52	23·6	−1·5
March	13·5	HS	E	.....	23	33	48·34	+0·07	.....	− 2	49	54·6	+0·5
	15·5	CS	E	.....	23	41	7·63	+0·02	.....	− 2	2	34·7	+1·1
	17·5	CS	E	.....	23	48		.....	.....	− 1	15	12·4	−0·0
	18·5	M	E	.....	23	52		.....	.....	− 0	51	29·8	−0·6
	19·5	CS	E	.....	23	55	43·51	−0·02	.....	− 0	27	47·2	+0·9
	20·5	RM	E	.....	23	59	22·09	+0·03	.....	− 0	4	3·6	+2·7
	22·5	M	E	.....	0	6	38·74	−0·03	.....	+ 0	43	14·3	−0·1
	25·5	CS	E	.....	0	17	33·22	−0·07	.....	+ 1	54	2·1	−1·9
	28·5	RM	E	.....	0	28		.....	.....	+ 3	4	30·0	−1·5
	31·5	CS	E	.....	0	39		.....	.....	+ 4	14	28·2	+0·8
April	5·5	RM	W	.....	0	58		.....	.....	+ 6	9	23·2	−1·5
	15·5	M	W	.....	1	34		.....	.....	+ 9	50	36·3	−1·0
	16·5	CS	W	.....	1	38		.....	.....	+10	11	56·4	+0·3
	17·5	RM	W	.....	1	41	44·06	+0·10	.....	+10	33	5·6	+1·0
	24·5	CS	W	.....	2	7	51·63	+0·01	.....	+12	55	53·6	−0·5
	26·5	HS	W	.....	2	15		.....	N	+13	34	55·3	+0·9
	28·5	CS	W	.....	2	23		.....	.....	+14	13	0·2	+0·9
	29·5	M	W	.....	2	27		.....	.....	+14	31	42·3	+0·7
May	6·5	CS	W	.....	2	54		.....	.....	+16	35	40·7	+1·0
	9·5	M	W	.....	3	5		.....	.....	+17	24	45·1	+0·0
	16·5	HS	W	.....	3	33		.....	.....	+19	8	52·5	−0·8
	17·5	M	W	.....	3	36	42·33	−0·01	.....	+19	22	32·1	+1·9

SUN—*continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	19·5	RM	W	.....	3	44	39·76	+0·03	.....	+19	49		.....
	20·5	HS	W	.....	3	48	38·94	−0·31	.....	+20	1	18·8	−2·5
	21·5	M	W	.....	3	52	39·40	+0·07	.....	+20	13	37·8	+0·1
	22·5	CS	W	.....	3	57		.....	N	+20	25	35·1	+1·7
	23·5	RM	W	.....	4	0	41·37	+0·26	.....	+20	37	11·4	+3·2
	31·5	M	W	.....	4	33	9·13	+0·32	.....	+21	56	45·3	−1·0
June	2·5	M	W	.....	4	41		.....	.....	+22	12	54·3	−0·9
	5·5	HS	W	.....	4	53	40·31	+0·01	.....	+22	34	15·7	−0·8
	8·5	CS	W	.....	5	6	3·24	+0·09	.....	+22	52		.....
	9·5	HS	W	.....	5	10	11·40	+0·13	.....	+22	57	12·1	+1·2
	10·5	M	W	.....	5	14	19·57	−0·09	.....	+23	1	54·8	+0·6
	11·5	CS	W	.....	5	18		.....	.....	+23	6	12·4	−0·6
	13·5	HS	W	.....	5	26	45·85	−0·08	.....	+23	13	35·7	−1·8
	14·5	M	W	.....	5	30	54·71	−0·27	.....	+23	16	41·3	−1·7
	16·5	RM	W	.....	5	39	13·44	−0·02	.....	+23	21	41·0	+1·3
	17·5	HS	W	.....	5	42	22·74	−0·08	.....	+23	23	27·8	−3·3
	18·5	M	W	.....	5	47	32·36	+0·09	.....	+23	24	57·9	+0·2
	19·5	CS	W	.....	5	51	41·89	+0·13	.....	+23	26	0·5	+1·0
	20·5	RM	W	.....	5	55	51·32	+0·20	.....	+23	26	35·8	+0·0
	24·5	RM	W	.....	6	12	29·34	+0·06	.....	+23	24	57·0	+0·5
	26·5	M	W	.....	6	20	47·91	+0·03	N	+23	21	36·2	−1·9
	27·5	CS	W	.....	6	24	56·91	−0·10	.....	+23	19	21·3	−0·7
	28·5	RM	W	.....	6	29	5·96	−0·01	.....	+23	16	41·4	+0·2
	30·5	M	W	.....	6	37	23·33	−0·01	.....	+23	10	7·3	+1·1
July	2·5	RM	W	.....	6	46		.....	N	+23	1	51·2	−2·9
	3·5	HS	W	.....	6	50		.....	.....	+22	57	12·1	+0·4
	4·5	M	W	.....	6	53	55·12	+0·01	.....	+22	52	4·5	−0·9
	5·5	CS	W	.....	6	58		.....	.....	+22	46	35·3	+0·1
	11·5	HS	W	W	7	22	37·15	−0·00	.....	+22	5	18·5	−2·2
	12·5	M	W	.....	7	26	41·33	−0·10	.....	+21	57	5·8	−1·8
	14·5	RM	W	.....	7	35		.....	.....	+21	39	33·4	−0·7
	18·5	RM	W	.....	7	50	56·60	−0·04	.....	+21	0	2·5	+0·0
	19·5	HS	W	.....	7	54	51·94	+0·09	.....	+20	49	15·0	−0·8
	23·5	HS	W	.....	8	10	54·94	+0·06	.....	+20	2	38·8	−1·9
	29·5	CS	W	.....	8	34		.....	.....	+18	42	49·7	−0·6
	31·5	HS	W	.....	8	24	22·59	+0·10	.....	+18	13	41·0	−1·7
Aug.	5·5	HS	W	.....	9	1	42·63	−0·09	.....	+16	55	45·9	+0·0
	11·5	M	W	.....	9	24	34·78	−0·02	.....	+15	13		.....
	15·5	RM	W	.....	9	40		.....	.....	+14	0	1·2	−1·0
	18·5	CS	W	.....	9	51		.....	.....	+13	2	44·6	−0·5
	19·5	RM	W	.....	9	55		.....	.....	+12	43	12·7	−1·3
	21·5	M	W	.....	10	1	56·98	+0·00	.....	+12	3	33·4	−2·5
	23·5	RM	W	.....	10	9	19·72	+0·06	.....	+11	23	10·3	−1·4
	25·5	RM	W	.....	10	16	40·66	−0·01	.....	+10	42		.....
Sept.	4·5	RM	W	.....	10	53	4·29	+0·06	.....	+ 7	7	1·4	−2·3

SUN—*continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
13·5	HS	W	.....	11 25 27·42	+0·08	.....	+ 3 43	.....
15·5	CS	E	.....	11 32 37·85	+0·06	.....	+ 2 57 28·1	−0·6
17·5	HS	E	.....	11 39 48·15	+0·02	.....	+ 2 11	.....
19·5	CS	E	.....	11 46 58·63	+0·07	.....	+ 1 24 41·2	+1·5
21·5	CS	E	.....	11 54 9·36	+0·12	.....	+ 0 38	.....
24·5	RM	E	.....	12 4 56·13	+0·01	.....	− 0 32	.....
25·5	HS	E	W	12 8 31·15	+0·12	.....	− 0 55 29·3	+0·9
26·5	M	E	.....	12 12 8·02	−0·11	.....	− 1 18 54·7	−0·7
27·5	CS	E	.....	12 15 44·50	+0·08	.....	− 1 42 17·6	−0·0
Oct. 3·5	HS	E	.....	12 37	.....	N	− 4 2 13·3	−1·8
4·5	HS	E	.....	12 41 5·64	+0·12	.....	− 4 25	.....
5·5	CS	E	.....	12 44 44·13	+0·11	.....	− 4 49	.....
9·5	M	E	.....	12 59 21·91	+0·16	.....	− 6 20	.....
10·5	RM	E	.....	13 3 2·42	+0·18	.....	− 6 43 6·6	−0·4
11·5	CS	E	.....	13 6 43·27	+0·09	.....	− 7 6	.....
15·5	CS	E	.....	13 21 32·18	+0·12	.....	− 8 35 26·9	−0·4
16·5	HS	E	.....	13 25 15·82	+0·02	.....	− 8 57 36·5	−2·2
17·5	M	E	.....	13 28 59·88	+0·01	.....	− 9 19 34·9	−0·5
19·5	CS	E	.....	13 36 30·10	−0·02	.....	−10 3	.....
22·5	RM	E	.....	13 47 50·55	+0·12	.....	−11 7 28·3	−0·3
23·5	M	E	.....	13 51 38·61	+0·05	.....	−11 29	.....
25·5	M	E	.....	13 59 16·98	−0·00	.....	−12 10	.....
27·5	CS	E	.....	14 6 58·38	+0·05	.....	−12 51 14·5	−0·8
28·5	HS	E	.....	14 10 50·16	+0·02	.....	−13 11 25·9	−1·5
29·5	M	E	.....	14 14 42·73	+0·02	.....	−13 31 23·2	−0·3
31·5	CS	E	.....	14 22 31·21	+0·07	.....	−14 10 40·2	+1·0
Nov. 3·5	RM	E	.....	14 34 17·39	+0·27	.....	−15 7 54·2	+0·5
11·5	RM	E	.....	15 6 18·25	+0·10	.....	−17 29 5·6	−1·0
13·5	CS	E	.....	15 14 21·97	+0·14	.....	−18 1 29·0	+0·1
18·5	HS	E	.....	15 35 3·38	−0·10	.....	−19 16 53·5	+0·1
28·5	M	E	.....	16 17	.....	.....	−21 21 2·5	−0·0
29·5	CS	E	.....	16 21 36·79	+0·20	.....	−21 31 19·8	−0·2
Dec. 2·5	RM	E	.....	16 34 33·67	+0·10	.....	−21 59 43·2	−1·5
4·5	M	W	.....	16 43 15·42	−0·15	.....	−22 16 28·7	+0·3
5·5	HS	W	.....	16 48	.....	.....	−22 24 14·5	+0·3
31·5	HS	W	.....	18 43.....	.....	.....	−23 5 8·4	+2·0
1925								
Jan. 9·5	CS	W	.....	19 22 7·21	+0·06	.....	−22 6 18·4	+2·0
17·5	CS	W	.....	19 56 39·17	+0·03	.....	−20 44 34·9	+1·6
23·5	M	W	.....	20 22	.....	.....	−19 26 34·3	+2·8
25·5	CS	W	W	20 30 27·18	+0·26	.....	−18 58	.....
27·5	M	W	.....	20 38 46·16	+0·07	.....	−18 27 19·9	+1·8
30·5	RM	W	.....	20 51 8·43	−0·18	.....	−17 39	.....
Feb. 1·5	CS	W	.....	20 59 19·66	+0·24	.....	−17 6	.....
3·5	RM	E	.....	21 7	.....	.....	−16 31 1·7	+4·3
7·5	CS	E	.....	21 23 31·98	+0·19	.....	−15 18 13·6	−0·1
9·5	RM	E	.....	21 31 29·62	+0·24	.....	−14 41 10·6	+1·9

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
14·5	M	E	.....	21 51 9·87	+0·02	.....	−13 1 0·3	−0·7
17·5	RM	E	.....	22 2 49·54	+0·16	.....	−11 58 50·9	+1·5
18·5	M	E	.....	22 6 41·14	−0·03	.....	−11 37 46·7	−0·1
28·5	HS	E	.....	22 45	.....	.....	− 7 57 49·4	+0·2
Mar. 2·5	M	E	.....	22 52	.....	.....	− 7 12 13·7	+1·1
3·5	CS	E	.....	22 55 57·61	+0·08	.....	− 6 49	.....
5·5	CS	W	.....	23 3 23·96	−0·13	.....	− 6 3 6·9	+1·2
7·5	CS	W	W	23 11 49·05	+0·21	.....	− 5 16 39·7	−1·1
9·5	HS	W	.....	23 18	.....	.....	− 4 29 49·8	+2·8
11·5	HS	W	.....	23 25 33·68	+0·01	.....	− 3 42 53·4	−0·3
12·5	RM	W	.....	23 29 14·26	+0·21	.....	− 3 19 19·9	−0·7
15·5	CS	W	.....	23 40 13·54	+0·02	.....	− 2 8	.....
20·5	CS	W	W	23 58 28·50	−0·07	.....	− 0 9 54·0	+0·6
23·5	CS	W	W	0 8 23·95	−0·08	.....	+ 1 1 10·3	+2·3
24·5	M	W	.....	0 13 2·30	−0·06	.....	+ 1 24 48·1	+2·1
25·5	CS	W	.....	0 40 40·67	+0·03	.....	+ 1 48 20·2	−1·6
26·5	M	W	.....	0 20	.....	.....	+ 2 11 56·5	+1·3
April 2·5	HS	E	W	0 45 47·01	+0·00	.....	+ 4 45 11·7	+2·1
4·5	RM	E	.....	0 53 4·48	+0·15	.....	+ 5 41 6·8	+1·7
6·5	HS	E	.....	1 0 22·26	+0·00	.....	+ 6 26 39·3	+2·7
8·5	RM	E	.....	1 7 41·05	+0·11	.....	+ 7 11 42·6	+1·1
9·5	M	E	.....	1 11 20·77	+0·15	.....	+ 7 34 4·3	+1·3
13·5	CS	E	.....	1 26 2·18	+0·02	.....	+ 9 2	.....
16·5	RM	E	.....	1 37 6·94	+0·14	.....	+10 7	.....
17·5	M	E	.....	1 40 49·12	+0·03	.....	+10 27 55·0	+1·9
18·5	HS	E	.....	1 44 31·85	+0·05	.....	+10 48 55·8	+1·6
20·5	RM	E	.....	1 51 58·50	+0·06	.....	+11 30 28·4	+3·8
21·5	M	E	.....	1 55 42·39	−0·02	.....	+11 51	.....
22·5	HS	E	.....	1 59 26·81	−0·01	.....	+12 11 9·3	−0·5
25·5	M	E	.....	2 10 42·77	−0·03	.....	+13 10 47·0	−0·1
28·5	RM	E	.....	2 22 2·77	−0·27	.....	+14 8 28·2	+0·8
30·5	HS	E	.....	2 29 38·79	−0·24	.....	+14 45 45·4	+0·7
May 9·5	RM	W	E	3 4 17·03	−0·18	.....	+17 20 49·9	−0·9
11·5	CS	W	.....	3 12 5·27	+0·07	.....	+17 52 16·5	+1·2
12·5	HS	W	.....	3 16 0·12	+0·03	.....	+18 7 30·2	−0·7
14·5	M	W	.....	3 23 51·71	+0·05	.....	+18 37 8·3	+1·1
15·5	CS	W	.....	3 27 48·38	+0·06	.....	+18 51 28·0	+0·6
18·5	M	W	.....	3 39 41·77	−0·09	.....	+19 32 33·3	+0·4
19·5	CS	W	.....	3 43 40·93	+0·08	.....	+19 45 36·9	+1·4
22·5	M	W	.....	3 55 41·09	−0·08	.....	+20 22 41·1	−0·5
27·5	CS	W	.....	4 15 52·17	+0·07	.....	+21 17 28·9	−1·3
28·5	CS	W	.....	4 20 55·70	−0·05	.....	+21 27 22·6	+0·1
29·5	RM	W	W	4 24 0·05	+0·25	.....	+21 37	.....
30·5	M	W	.....	4 28 4·31	+0·01	.....	+21 46 0·0	−0·2
June 5·5	M	E	E	4 52 39·40	−0·09	.....	+22 33	.....

SUN—*continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
6·5	RM	E	E	4 56 45·77	+0·21	.....	+22 39 6·4	−0·8
8·5	RM	E	.....	5 5 1·63	−0·03	.....	+22 50 45·3	−0·2
11·5	CS	E	.....	5 17 26·49	+0·13	.....	+23 5 13·2	+0·8
13·5	CS	E	.....	5 25 44·04	+0·02	.....	+23 12 48·9	+0·2
16·5	HS	E	.....	5 38 11·84	+0·01	.....	+23 21 9·4	+0·0
17·5	M	E	.....	5 42 21·37	+0·01	.....	+23 23 7·0	+0·0
19·5	CS	E	.....	5 50 40·68	+0·05	.....	+23 25 47·4	−0·6
22·5	RM	E	.....	6 3 9·60	−0·11	.....	+23 26 42·2	−1·1
23·5	CS	E	.....	6 7	.....	.....	+23 26 12·8	+0·6
24·5	HS	E	.....	6 11 28·72	−0·16	.....	+23 25 15·2	−1·0
27·5	M	E	W	6 23 56·86	+0·06	S	+23 20 3·3	+3·2
July 8·5	RM	W	.....	7 9 20·83	+0·06	.....	+22 29 24·4	−1·1
9·5	RM	W	W	7 13 26·62	+0·22	.....	+22 22 25·6	−1·3
10·5	M	W	.....	7 17 31·68	+0·01	.....	+22 15 4·8	−0·3
13·5	M	W	.....	7 29 44·95	+0·02	.....	+21 50 42·3	−0·3
14·5	M	W	.....	7 33 48·40	−0·07	.....	+21 41 49·6	−0·2
22·5	M	W	.....	8 5 58·67	+0·03	.....	+20 17 45·5	−0·3
24·5	RM	W	.....	8 13 55·72	+0·08	.....	+19 53 15·6	−0·4
25·5	RM	W	.....	8 17 53·33	+0·08	.....	+19 40 30·8	−0·4
27·5	CS	W	.....	8 26	.....	.....	+19 14 2·4	−0·7
28·5	CS	W	.....	8 30	.....	.....	+19 0 20·6	+0·4
31·5	CS	W	.....	8 41 25·97	+0·01	.....	+18 17 20·4	−0·1
Aug. 7·5	CS	E	.....	9 8 26·08	+0·08	.....	+16 26 46·3	−1·0
10·5	CS	E	.....	9 19 51·53	+0·02	.....	+15 35	.....
11·5	HS	E	.....	9 23 38·85	−0·04	.....	+15 16 39·9	−0·4
12·5	HS	E	.....	9 27 25·89	+0·17	.....	+14 59 46·7	+0·6
14·5	CS	E	.....	9 34 57·86	+0·09	.....	+14 23 14·3	−0·1
15·5	CS	E	E	9 38 43·00	−0·00	.....	+14 4 36·2	−1·6
17·5	HS	E	.....	9 46 11·98	+0·07	.....	+13 26 46·7	+2·3
18·5	HS	E	.....	9 49 55·69	+0·09	.....	+13 17 28·9	+0·5
19·5	HS	E	W	9 53 38·83	+0·03	.....	+12 48 0·2	+0·5
20·5	RM	E	W	9 56 21·61	+0·11	.....	+12 28	
21·5	HS	E	.....	10 1 3·75	+0·03	.....	+12 8 25·7	−0·5
22·5	CS	E	.....	10 4 45·49	+0·03	.....	+11 48 22·2	+0·2
24·5	CS	E	.....	10 12 7·76	+0·18	.....	+11 7 40·0	−0·4
25·5	M	E	.....	10 15 48·04	+0·06	.....	+10 47	.....
26·5	M	E	.....	10 19 27·91	−0·03	.....	+10 26 17·0	+0·3
27·5	HS	E	.....	10 23 7·53	+0·04	.....	+10 5 20·5	+0·7
29·5	M	E	W	10 29 25·35	−0·06	S	+ 9 22 57·7	−0·4
31·5	HS	E	.....	10 37 41·98	+0·11	.....	+ 8 40 2·1	+1·4
Sept. 5·5	HS	W	.....	10 55 47·87	+0·16	.....	+ 6 50 18·0	+0·0
8·5	M	W	.....	11 6 36·44	−0·01	.....	+ 5 42 4·6	−0·1
14·5	CS	W	.....	11 28 10·16	−0·03	.....	+ 3 26	.....
15·5	M	W	W	11 31 45·63	+0·07	.....	+ 3 3 5·3	−0·4
17·5	RM	W	W	11 38 55·99	−0·20	.....	+ 2 16 46·0	−0·7

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	22·5	M	W	.....	11	56	53·06	−0·05	.....	+ 0	20		.....
	23·5	HS	W	E	12	0	28·62	−0·07	.....	− 0	3		.....
	25·5	RM	W	.....	12	7	40·23	+0·03	.....	− 0	49	53·3	−0·1
	26·5	M	W	.....	12	11	16·11	−0·04	.....	− 1	13	17·1	−0·5
Oct.	1·5	M	W	.....	12	29	19·12	+0·20	.....	− 3	9	59·8	+1·6
	5·5	HS	E	W	12	43	50·34	+0·21	.....	− 4	43		.....
	10·5	M	E	.....	13	2	8·02	+0·12	.....	− 6	37	30·6	+0·4
	13·5	M	E	.....	13	13	12·15	−0·05	.....	− 7	45	21·8	−1·7
	14·5	M	E	.....	13	16	54·59	−0·09	.....	− 8	8		.....
	15·5	CS	E	.....	13	21		.....	.....	− 8	30	2·8	−0·8
	16·5	CS	E	.....	13	24	21·54	+0·22	.....	− 8	52	11·7	+0·7
	17·5	HS	E	.....	13	28	5·51	+0·01	.....	− 9	14		.....
	18·5	CS	E	.....	13	32		.....	.....	− 9	36	9·8	+0·4
	27·5	HS	E	.....	14	6	2·25	+0·07	.....	−12	46		.....
	31·5	CS	E	.....	14	21	32·53	+0·02	.....	−14	5	55·8	+1·1
Nov.	2·5	RM	E	.....	14	29	22·50	+0·15	.....	−14	44	25·0	+0·4
	3·5	RM	W	.....	14	33	18·60	+0·11	.....	−15	3	18·1	+0·4
	4·5	RM	W	.....	14	37	15·48	+0·01	.....	−15	22		.....
	10·5	RM	W	.....	15	1	15·24	+0·10	.....	−17	8	16·0	+0·3
	12·5	CS	W	.....	15	9		.....	S	−17	41	30·4	−3·4
	17·5	M	W	.....	15	29	53·87	−0·13	.....	−18	58	57·6	−0·9
	23·5	M	W	.....	15	54	59·62	−0·12	.....	−20	20	38·0	+2·9
	24·5	CS	W	.....	15	59	13·56	+0·14	.....	−20	33	2·5	−1·2
	26·5	CS	W	.....	16	9	43·16	+0·12	.....	−20	56	32·4	+0·5
	30·5	CS	W	.....	16	25		.....	.....	−21	38	50·7	−0·3
Dec.	9·5	RM	E	.....	17	4	0·67	−0·04	.....	−22	49	21·1	+4·1
	10·5	HS	E	.....	17	8		.....	.....	−22	54	58·4	+5·6
	15·5	HS	E	.....	17	30	29·13	+0·02	.....	−23	16	25·6	+1·7
	23·5	CS	E	.....	18	6	0·19	+0·25	.....	−23	26	24·1	+2·7
	24·5	CS	E	.....	18	10		.....	.....	−23	25	33·3	+1·1
	28·5	RM	E	.....	18	28	12·03	+0·30	.....	−23	17	23·4	−0·7
	29·5	RM	E	.....	18	33		.....	.....	−23	14	6·2	+3·2
	30·5	HS	E	.....	18	37	3·30	+0·00	.....	−23	10	25·5	+2·6
1926													
Jan.	7·5	RM	E	.....	19	12		.....	.....	−22	24	29·3	−1·5
	8·5	CS	E	.....	19	16	39·99	+0·09	S	−22	16	39·1	+2·4
	10·5	CS	E	.....	19	25		.....	.....	−21	59	51·3	−1·1
	14·5	HS	W	.....	19	43		.....	.....	−21	20	58·9	+1·3
	22·5	HS	W	.....	20	16	50·01	−0·13	.....	−19	43	51·8	+6·0
	25·5	M	W	.....	20	29		.....	.....	−19	1	18·8	+3·5
	27·5	RM	W	.....	20	37	44·38	+0·11	.....	−18	31	15·0	−1·0
Feb.	2·5	HS	W	.....	21	2	22·50	+0·14	.....	−16	52	58·5	+0·6
	5·5	RM	E	.....	21	14	30·78	+0·31	.....	−15	59	46·4	+0·6
	7·5	CS	E	.....	21	23		.....	.....	−15	22	53·7	+1·7

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	9·5	RM	E	.....	21	30	29·42	+0·20	.....	−14	45	1·0	−0·1
	10·5	M	E	.....	21	34		.....	.....	−14	25	39·8	+1·5
	12·5	HS	E	.....	21	42	21·93	+0·08	.....	−13	46	13·9	+4·8
	13·5	RM	E	.....	21	46	17·67	+0·13	.....	−13	26	15·7	+1·2
	16·5	HS	E	.....	21	58	0·07	+0·02	.....	−12	24	53·5	+0·7
Mar.	4·5	HS	E	.....	22	59		.....	.....	− 6	31	59·4	+2·5
	9·5	M	W	.....	23	17	17·03	−0·03	.....	− 4	36		.....
	10·5	RM	W	.....	23	20	58·45	+0·12	.....	− 4	12	14·0	+0·6
	11·5	M	W	.....	23	24	39·09	−0·18	.....	− 3	49		.....
	12·5	HS	W	.....	23	28	19·83	−0·07	.....	− 3	25	7·0	+1·8
	15·5	M	W	W	23	39	20·07	−0·00	.....	− 2	14	13·3	−0·5
	17·5	M	W	.....	23	46	38·81	−0·11	.....	− 1	26	48·9	−0·2
	18·5	RM	W	.....	23	50	18·01	+0·02	.....	− 1	3	3·0	+2·7
	20·5	RM	W	.....	23	57	35·72	+0·10	.....	− 0	15	38·0	+1·7
	22·5	M	W	.....	0	4	52·73	+0·11	.....	+ 0	31	43·2	−0·1
	29·5	M	W	.....	0	30	19·68	−0·08	.....	+ 3	16	34·2	+1·8
	30·5	RM	W	.....	0	33	58·00	+0·08	.....	+ 3	39	54·7	+2·0
April	6·5	M	E	.....	0	59	28·23	+0·01	.....	+ 6	21	3·0	+1·9
	9·5	HS	E	.....	1	10	26·95	+0·04	.....	+ 7	28	35·5	+0·6
	10·5	M	E	.....	1	14	6·92	−0·05	.....	+ 7	50	53·0	+1·2
	12·5	RM	E	.....	1	21	27·92	−0·03	.....	+ 8	35	2·9	+1·2
	13·5	HS	E	.....	1	25	8·87	−0·01	.....	+ 8	56	53·8	−0·1
	15·5	CS	E	.....	1	32	31·87	+0·18	.....	+ 9	40	13·1	+1·8
	19·5	CS	E	.....	1	47	21·45	+0·01	.....	+11	4	48·0	+0·4
	21·5	HS	E	.....	1	55		.....	.....	+11	46	2·7	+2·0
	22·5	M	E	.....	1	59		.....	.....	+12	6	20·4	+0·4
	23·5	CS	E	.....	2	2	17·57	+0·13	.....	+12	26	28·0	+0·6
	27·5	CS	E	.....	2	17	20·67	+0·07	N	+13	44	48·5	−1·7
	29·5	HS	E	.....	2	24	55·17	+0·03	.....	+14	22	41·4	+0·0
May	1·5	CS	E	.....	2	32	31·85	+0·06	.....	+14	59	35·8	+0·0
	4·5	HS	W	.....	2	44	0·95	+0·05	.....	+15	53	6·6	+0·5
	5·5	CS	W	W	2	47	51·74	+0·00	.....	+16	10	28·3	+2·9
	7·5	RM	W	.....	2	55	35·20	+0·02	.....	+16	44	16·9	+1·4
	8·5	HS	W	.....	2	59	27·76	−0·02	.....	+17	0	47·0	+1·2
	12·5	HS	W	W	3	15	4·04	+0·04	.....	+18	3	54·7	−0·2
	14·5	M	W	.....	3	22	55·52	−0·03	.....	+18	33	42·9	+1·3
	15·5	RM	W	.....	3	26	52·24	+0·06	.....	+18	48	6·8	−0·1
	17·5	CS	W	.....	3	34	47·08	−0·03	.....	+19	16	0·6	+0·5
	25·5	CS	W	.....	4	6	48·13	−0·06	.....	+20	54	6·8	+0·4
	26·5	M	W	.....	4	10	50·53	−0·10	.....	+21	4	46·8	−0·7
	27·5	RM	W	.....	4	14	53·67	+0·13	.....	+21	15	6·0	−0·6
	29·5	CS	W	.....	4	23	0·75	−0·06	.....	+21	34	38·9	+0·0
June	4·5	HS	E	.....	4	47	33·35	+0·03	.....	+22	24	13·6	+1·1
	5·5	CS	E	.....	4	51	40·20	+0·07	.....	+22	31		.....
	9·5	HS	E	W	5	8	10·81	+0·04	.....	+22	54	48·6	+0·6

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
11·5	RM	E	.....	5 16 27·91	+0·15	.....	+23 4 14·2	−0·1
15·5	M	E	W	5 33 4·09	+0·08	.....	+23 18 13·7	+0·4
16·5	RM	E	.....	5 37 13·35	−0·06	.....	+23 20 38·8	−2·7
17·5	M	E	.....	5 41 22·93	+0·05	.....	+23 23	.....
20·5	CS	E	.....	5 54	.....	.....	+23 26 26·0	−0·4
22·5	CS	E	.....	6 2 10·67	−0·03	.....	+23 26 50·5	+0·6
23·5	HS	E	.....	6 6 20·18	−0·01	.....	+23 26 24·2	−0·3
24·5	M	E	W	6 10 29·50	−0·10	.....	+23 25 33·8	−0·5
25·5	RM	E	.....	6 14 39·02	+0·11	.....	+23 24 17·3	−2·0
27·5	CS	E	.....	6 23	.....	.....	+23 20 35·3	+0·1
28·5	HS	E	.....	6 27 6·13	+0·04	.....	+23 18 5·6	−0·6
29·5	M	E	.....	6 31 14·92	+0·06	.....	+23 15 14·1	+1·3
30·5	HS	E	.....	6 35 23·49	+0·06	.....	+23 12	.....
July 2·5	M	E	.....	6 43 39·89	−0·04	.....	+23 4 7·2	+1·2
3·5	HS	W	.....	6 47 47·86	+0·04	.....	+22 59 35·8	+0·5
4·5	CS	W	.....	6 52	.....	.....	+22 54 40·6	+0·2
7·5	M	W	.....	7 4 16·57	+0·12	.....	+22 38	.....
13·5	HS	W	.....	7 28 48·23	+0·08	.....	+21 52 46·8	+0·2
14·5	RM	W	.....	7 32 51·96	+0·09	.....	+21 44 1·2	+2·1
15·5	CS	W	.....	7 37	.....	.....	+21 34 49·3	+0·0
16·5	M	W	.....	7 40 57·81	+0·05	.....	+21 25 17·6	+0·1
17·5	HS	W	.....	7 44 59·98	+0·06	.....	+21 15 23·5	−0·3
19·5	RM	W	.....	7 53 2·81	+0·20	.....	+20 54 31·4	−0·3
23·5	RM	W	.....	8 9 1·19	+0·04	.....	+20 9	.....
26·5	M	W	.....	8 20 53·81	−0·10	.....	+19 30 35·9	+0·0
27·5	CS	W	.....	8 24 50·49	+0·14	.....	+19 17	.....
Aug. 5·5	RM	W	.....	8 59 51·84	+0·10	.....	+17 4	.....
11·5	CS	W	.....	9 22 46·23	+0·07	.....	+15 22	.....
20·5	CS	W	.....	9 57	.....	.....	+12 32 57·8	−0·2
24·5	M	W	W	10 11 15·28	+0·05	.....	+11 12	.....
25·5	CS	W	.....	10 14 55·77	+0·16	.....	+10 52	.....
26·5	M	W	.....	10 18 35·69	+0·11	.....	+10 31	.....
27·5	M	W	W	10 22 15·27	+0·11	.....	+10 10	.....
Sept. 2·5	RM	W	.....	10 44 5·61	+0·02	.....	+ 8 2	.....
8·5	RM	W	.....	11 5 46·10	−0·05	.....	+ 5 48	.....
28·5	RM	W	.....	11 17 36·98	+0·19	.....	− 1 55	.....
30·5	RM	W	.....	12 24 50·31	+0·19	.....	− 2 41 8·2	+0·4
1927								
April 4·5	CS	E	.....	0 51	.....	N	+ 5 29 55·4	+2·0
6·5	M	E	.....	0 58 35·32	−0·01	.....	+ 6 16	.....
7·5	CS	E	.....	1 2 14·62	+0·01	.....	+ 6 38	.....
8·5	M	E	.....	1 5 4·00	−0·10	.....	+ 7 0 47·3	+0·9
9·5	HS	E	.....	1 10	.....	N	+ 7 23 13·1	+0·6

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
10·5	CS	E	.....	1 13	.....	.....	+ 7 45 30·9	+0·0
11·5	CS	E	.....	1 16 54·02	+0·13	.....	+ 8 7 40·6	−0·8
13·5	HS	E	.....	1 24 15·15	+0·11	S	+ 8 51 37·7	+0·4
14·5	M	E	.....	1 27 56·16	+0·10	.....	+ 9 13 24·2	+2·1
16·5	CS	E	.....	1 35 19·21	+0·12	N	+ 9 56 22·7	−0·5
20·5	CS	E	.....	1 50 9·70	+0·08	.....	+11 21	.....
21·5	CS	E	.....	1 53 53·36	+0·08	S	+11 40 56·5	−2·5
27·5	M	E	.....	2 16 25·06	−0·03	.....	+13 40 8·6	−0·0
28·5	HS	E	.....	2 20 12·18	+0·04	.....	+13 59 17·3	+1·9
29·5	CS	E	.....	2 24	.....	.....	+14 18 3·6	−4·9
30·5	CS	E	.....	2 27 47·82	+0·00	.....	+14 37	.....
May 7·5	HS	W	.....	2 54 39·59	+0·06	.....	+16 40 17·8	−0·8
17·5	HS	W	.....	3 33 49·10	+0·15	.....	+19 12 42·0	−0·1
21·5	HS	W	.....	3 49 44·63	+0·10	.....	+20 4 49·4	+0·9
30·5	RM	W	.....	4 26	.....	.....	+21 41 43·4	+0·6
June 1·5	RM	W	.....	4 34 16·63	+0·27	.....	+21 59 11·4	−0·8
2·5	CS	W	.....	4 38	.....	.....	+22 7 22·8	+0·1
6·5	CS	W	.....	4 55	.....	N	+22 36 10·8	+0·0
8·5	HS	W	.....	5 3 3·22	−0·16	.....	+22 48 13·1	+0·5
10·5	RM	W	.....	5 11 19·65	+0·03	.....	+22 58 37·5	−0·6
13·5	M	W	.....	5 23 45·30	+0·03	.....	+23 11 14·4	+0·2
14·5	HS	W	.....	5 27 54·16	−0·08	.....	+23 14 37·6	+0·2
15·5	RM	W	.....	5 32 3·40	+0·05	.....	+23 17 36·3	+0·4
18·5	HS	W	.....	5 43 31·39	+0·01	.....	+23 24 3·9	+0·4
20·5	RM	W	.....	5 52 50·37	−0·08	.....	+23 26	.....
21·5	CS	W	.....	5 57 0·27	+0·21	.....	+23 27	.....
24·5	RM	W	.....	6 9 28·90	+0·06	.....	+23 25 51·7	−0·1
July 4·5	HS	W	.....	6 51	.....	N	+22 55 55·6	+1·0
5·5	HS	W	.....	6 55 4·02	+0·14	.....	+22 50 44·3	+0·6
8·5	M	E	W	7 7 23·66	+0·20	.....	+22 32 42·5	+0·6
11·5	HS	E	.....	7 19 40·32	+0·05	.....	+22 11 10·1	+0·6
12·5	CS	E	.....	7 23 44·86	+0·00	.....	+22 3 11·3	−1·5
14·5	CS	E	.....	7 32	.....	.....	+21 46 10·8	−0·6
16·5	HS	E	.....	7 39 58·63	+0·13	.....	+21 27 41·1	+0·3
18·5	M	E	.....	7 48 2·29	−0·06	.....	+21 7 42·3	−0·4
19·5	HS	E	.....	7 52 3·63	+0·11	.....	+20 57 10·7	−0·7
20·5	RM	E	.....	7 56 4·17	+0·01	.....	+20 46	.....
21·5	HS	E	.....	8 0	.....	.....	+20 35 5·9	+0·7
25·5	RM	E	.....	8 15 59·26	+0·02	.....	+19 46 45·2	+0·1
26·5	HS	E	W	8 19 56·53	−0·03	.....	+19 33 49·3	−0·6
28·5	CS	E	.....	8 27 49·46	+0·03	.....	+19 7 1·8	+0·3
29·5	RM	E	.....	8 32	.....	.....	+18 53 8·9	+0·3
30·5	HS	E	.....	8 35 39·96	+0·05	.....	+18 38 56·9	−0·0
Aug. 1·5	M	E	.....	8 43 27·98	+0·06	.....	+18 9 39·8	+0·7
2·5	CS	E	.....	8 47 21·03	+0·04	.....	+17 54	.....

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
3·5	RM	E	.....	8 51 13·35	−0·09	.....	+17 39 8·1	−1·8
5·5	M	W	.....	8 58 56·43	−0·04	.....	+17 7 31·2	−0·7
6·5	CS	W	.....	9 2 47·05	−0·02	.....	+16 51	.....
10·5	M	W	W	9 18 3·19	−0·13	.....	+15 43 42·6	+0·3
12·5	RM	W	.....	9 25 37·92	+0·04	.....	+15 8 21·4	−1·5
13·5	HS	W	.....	9 29 24·43	+0·12	.....	+14 50 21·6	−0·2
22·5	RM	W	.....	10 2 59·05	+0·08	.....	+11 58 3·9	−1·0
24·5	M	W	.....	10 10 21·51	−0·01	.....	+11 17 34·2	+0·9
25·5	HS	W	.....	10 14 2·31	+0·16	.....	+10 57	.....
26·5	RM	W	.....	10 17 42·52	+0·15	.....	+10 36	.....
Sept. 6·5	RM	W	.....	10 57 41·21	−0·01	.....	+ 6 38 40·1	+0·4
8·5	M	W	.....	11 4 53·69	+0·03	.....	+ 5 53 48·8	−1·6
9·5	CS	W	.....	11 8 29·72	+0·15	.....	+ 5 31 15·3	−1·6
10·5	RM	E	.....	11 12 5·37	+0·06	.....	+ 5 8 37·8	−0·1
12·5	HS	E	.....	11 19 16·34	−0·04	.....	+ 4 23 4·8	+0·3
14·5	CS	E	.....	11 26 27·02	−0·02	.....	+ 3 37 11·9	−1·1
16·5	HS	E	.....	11 33 37·59	+0·09	.....	+ 2 51 5·3	−0·1
17·5	M	E	.....	11 37 12·96	+0·25	.....	+ 2 27 54·4	−2·0
20·5	RM	E	.....	11 47 58·49	+0·03	.....	+ 1 18 10·4	−2·1
21·5	HS	E	.....	11 51 33·94	+0·11	.....	+ 0 54 52·3	−1·0
24·5	RM	E	.....	12 2 20·56	+0·06	.....	− 0 15 12·5	+0·6
29·5	RM	E	.....	12 20 21·29	+0·01	.....	− 2 12 10·3	+0·5
Oct. 3·5	CS	E	.....	12 34 50·01	+0·13	.....	− 3 45 26·5	−0·7
4·5	RM	E	.....	12 38 27·84	+0·11	.....	− 4 8 39·5	−1·2
5·5	HS	W	.....	12 42 6·01	+0·12	.....	− 4 31 48·8	−0·7
8·5	RM	W	.....	12 53 2·79	+0·20	.....	− 5 40 54·4	+0·2
10·5	HS	W	.....	13 0 22·36	−0·04	.....	− 6 26 38·3	+0·4
11·5	M	W	.....	13 4 3·00	+0·05	.....	− 6 49 22·6	+0·1
15·5	M	W	.....	13 19	.....	.....	− 8 19 22·4	+0·2
17·5	CS	W	.....	13 26	.....	.....	− 9 3 41·5	−1·8
25·5	M	W	W	13 56 30·61	−0·07	.....	−11 55 18·5	−0·0
26·5	CS	W	.....	14 0 20·46	+0·04	.....	−12 16 1·3	−0·2
28·5	HS	W	W	14 8 2·20	+0·09	.....	−12 56 53·0	−0·8
31·5	HS	W	.....	14 20	.....	.....	−13 56 37·5	−1·0
Nov. 5·5	RM	E	.....	14 39 19·29	+0·03	.....	−15 31 37·0	−0·7
9·5	M	E	.....	14 55 17·04	+0·00	.....	−16 43 0·6	+0·2
14·5	M	E	.....	15 15 33·46	+0·05	.....	−18 5 52·5	−1·2
29·5	RM	E	.....	15 18 28·74	+0·05	N	−21 24 4·1	+4·9
Dec. 1·5	CS	E	.....	16 27	.....	.....	−21 43 52·8	+1·8
3·5	RM	E	.....	16 35 43·92	+0·23	.....	−22 2 9·4	+0·9
14·5	M	E	.....	17 23 54·68	+0·06	.....	−23 11 20·6	+1·4
15·5	CS	E	.....	17 28 20·07	+0·13	.....	−23 14 54·7	−2·0
30·5	M	E	.....	18 34 54·83	+0·03	.....	−23 12 23·4	−0·1

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
1928													
Jan.	5·5	M	W	.....	19	1	23·73	+0·02	.....	−22	41	53·3	+2·3
	27·5	CS	W	E	20	35	43·53	+0·19	N	−18	38	42·2	+2·8
	29·5	CS	W	.....	20	44		.....	.....	−18	7	33·7	+0·9
	30·5	HS	W	.....	20	48		.....	.....	−17	51	28·2	+1·9
Feb.	2·5	HS	W	.....	21	0	24·11	−0·06	.....	−17	1	19·1	+4·6
	6·5	CS	W	.....	21	17		.....	.....	−15	50	25·8	+1·7
	7·5	HS	W	.....	21	20	35·22	+0·02	.....	−15	32	1·2	+0·6
	10·5	CS	W	.....	21	33		.....	N	−14	35	10·7	+0·4
	13·5	M	W	.....	21	44		.....	.....	−13	36	5·4	+3·2
	20·5	CS	W	.....	22	11	33·94	+0·04	.....	−11	10	50·3	+1·4
	21·5	RM	W	.....	22	15	24·34	+0·12	.....	−10	49		.....
	28·5	RM	W	W	22	41	58·65	+0·05	.....	− 8	14	25·5	+2·7
March	1·5	RM	W	W	22	49	28·17	−0·68	.....	− 7	29	2·8	+0·3
	2·5	M	W	.....	22	53	13·01	−0·18	.....	− 7	6	9·4	+1·5
	3·5	CS	W	.....	22	56	57·04	+0·01	.....	− 6	43	11·1	+1·7
	5·5	M	W	E	23	4	23·26	−0·02	.....	− 5	57		.....
	6·5	RM	W	.....	23	8	5·98	+0·21	.....	− 5	33	47·0	+0·6
	8·5	CS	W	.....	23	16		.....	.....	− 4	47	5·4	+0·8
	10·5	RM	W	.....	23	22	51·89	+0·09	.....	− 4	0	9·7	+1·2
	12·5	M	W	.....	23	30		.....	.....	− 3	13	5·4	−1·8
	15·5	RM	W	.....	23	41	12·38	+0·05	.....	− 2	2	5·7	+0·9
	23·5	M	W	.....	0	10	22·61	−0·37	.....	+ 1	8		.....
April	10·5	HS	W	.....	1	15	0·23	+0·11	.....	+ 8	2	16·6	−0·8
	11·5	CS	W	.....	1	20		.....	.....	+ 8	24	22·4	+0·8
	16·5	M	W	.....	1	38	7·44	+0·07	.....	+10	17	31·9	−0·6
	17·5	HS	W	.....	1	41	49·89	+0·05	.....	+10	33	41·6	+1·0
	18·5	M	W	.....	1	45	32·53	−0·19	.....	+10	54	39·8	+0·1
	20·5	M	W	.....	1	52	59·75	+0·05	.....	+11	36		.....
	21·5	M	W	.....	1	56	43·87	+0·04	.....	+11	56	31·7	+0·7
	27·5	M	W	.....	2	19	17·96	+0·01	.....	+13	54	46·3	+0·5
May	4·5	HS	E	.....	2	46	0·38	+0·12	.....	+16	2	10·1	+0·4
	5·5	CS	E	.....	2	49	51·40	+0·08	.....	+16	19	20·2	−0·2
	7·5	RM	E	.....	2	57	35·21	+0·06	.....	+16	52	51·0	−1·6
	8·5	M	E	.....	3	1	28·07	+0·15	.....	+17	9	13·5	−0·3
	9·5	HS	E	.....	3	5	21·23	−0·04	.....	+17	25	16·4	−1·3
	11·5	RM	E	.....	3	13	9·85	+0·10	.....	+17	56	34·2	+0·9
	14·5	HS	E	.....	3	24	56·85	−0·07	.....	+18	41	11·3	−0·2
	16·5	HS	E	.....	3	32	51·33	+0·00	.....	+19	9		.....
	21·5	HS	E	.....	3	52	47·41	+0·10	.....	+20	14	10·1	+0·9
	28·5	HS	E	.....	4	22	3·58	+0·21	.....	+21	30	11·0	+1·5
June	1·5	M	E	E	4	37	22·50	+0·01	.....	+22	5	28·8	+0·9
	7·5	RM	E	W	5	2	2·74	+0·13	.....	+22	46	51·3	+1·3
	12·5	RM	W	.....	5	22	44·38	−0·05	N	+23	10	21·2	−0·9
	13·5	M	W	.....	5	26	53·48	−0·01	.....	+23	14		.....
	15·5	M	W	.....	5	35		.....	.....	+23	19	36·2	−0·5

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	16·5	RM	W	.....	5	39	21·82	+0·22	.....	+23	21	53·4	+1·2
	18·5	HS	W	.....	5	47	40·95	+0·07	.....	+23	25	8·5	−0·5
	19·5	CS	W	.....	5	51	50·56	−0·03	.....	+23	26	9·9	−0·5
	20·5	M	W	.....	5	56	0·31	+0·02	.....	+23	26	47·1	+0·5
	26·5	RM	W	.....	6	20	57·27	+0·02	.....	+23	21	42·8	−0·6
	28·5	CS	W	.....	6	29	15·02	−0·12	.....	+23	16	45·2	+0·7
July	21·5	M	W	W	8	3	6·32	−0·11	.....	+20	26	22·1	+0·2
	24·5	RM	W	.....	8	15	2·16	+0·04	.....	+19	49	51·2	+0·6
	25·5	CS	W	.....	8	18	59·52	+0·03	.....	+19	37	0·8	+0·6
	26·5	M	W	.....	8	22	56·18	−0·07	.....	+19	23	49·6	−0·8
	30·5	CS	W	.....	8	38	37·13	+0·02	.....	+18	28	1·8	+0·2
	31·5	M	W	.....	8	42	30·71	−0·09	.....	+18	13	18·7	+0·2
Aug.	2·5	RM	W	.....	8	50		.....	.....	+17	42	59·7	+0·8
	9·5	HS	E	W	9	17	7·07	−0·02	.....	+15	48	0·2	−0·8
	10·5	CS	E	.....	9	20	54·96	+0·06	.....	+15	30	32·1	−0·0
	11·5	RM	E	.....	9	25		.....	.....	+15	12	47·0	−1·2
	13·5	M	E	.....	9	32	15·22	+0·11	.....	+14	36	37·6	+0·7
	14·5	RM	E	.....	9	36	0·77	+0·04	.....	+14	18	10·0	+0·1
	16·5	RM	E	.....	9	44		.....	.....	+13	40	33·2	−1·9
	17·5	M	E	W	9	47	14·58	+0·12	.....	+13	21	27·8	−0·2
	20·5	CS	E	.....	9	58	23·50	−0·03	.....	+12	22	50·7	−1·0
	22·5	CS	E	.....	10	5	47·19	+0·08	.....	+11	42	48·3	−0·4
	25·5	M	E	.....	10	16	49·17	+0·14	.....	+10	41	20·4	−1·5
	27·5	M	E	.....	10	24	8·36	+0·16	.....	+ 9	59	34·0	+0·7
	28·5	HS	E	.....	10	27	42·27	+0·08	.....	+ 9	38	24·2	−0·4
	30·5	RM	E	.....	10	35	4·11	+0·03	.....	+ 8	55	38·5	−1·6
	31·5	M	E	.....	10	37	41·99	−0·04	.....	+ 8	34		.....
Sept.	4·5	RM	E	.....	10	53	11·00	+0·04	.....	+ 7	6	24·0	−1·1
	5·5	M	E	.....	10	56	47·51	−0·07	.....	+ 6	44	11·1	−0·7
	6·5	HS	E	.....	11	0	24·05	+0·06	.....	+ 6	21	52·0	+0·2
	7·5	M	E	.....	11	4	0·22	+0·01	.....	+ 5	59		.....
	8·5	RM	E	.....	11	6	36·27	−0·01	.....	+ 5	36	51·6	−1·1
	17·5	M	W	W	11	39	56·02	+0·07	S	+ 2	10	20·8	−0·2
	18·5	RM	W	.....	11	43	31·39	+0·14	.....	+ 1	47	5·9	−0·5
	22·5	RM	W	.....	11	57	52·85	+0·17	.....	+ 0	13	50·1	+1·8
	24·5	CS	W	.....	12	5	3·83	−0·05	.....	− 0	32	55·0	+2·2
	28·5	CS	W	.....	12	19	28·11	−0·01	.....	− 2	6	27·1	+1·0
	29·5	HS	W	.....	12	23	4·75	+0·06	.....	− 2	29	49·0	−0·3
	30·5	CS	W	W	12	26	41·46	−0·04	.....	− 2	53		.....
Oct.	1·5	M	W	.....	12	30	18·61	−0·00	.....	− 3	16	26·1	−0·6
	3·5	HS	W	.....	12	37	33·69	−0·09	.....	− 4	2	54·2	−0·2
	4·5	CS	W	E	12	41	11·89	+0·02	.....	− 4	26	5·0	−0·8
	6·5	RM	W	.....	12	48	29·33	+0·17	.....	− 5	12		.....
	8·5	HS	W	.....	12	55	48·27	+0·14	.....	− 5	58	12·0	−0·8
	9·5	CS	W	.....	12	59		.....	S	− 6	21	2·2	+0·4

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
10·5	M	W	.....	13 3 9·03	+0·13	.....	− 6 43 48·7	+0·3
13·5	CS	W	E	13 14 13·62	−0·07	.....	− 7 51 34·9	−0·1
25·5	RM	W	.....	13 59 24·71	+0·17	.....	−12 11 2·8	−0·0
30·5	RM	W	.....	14 19	.....	.....	−13 51 48·1	+0·4
Nov. 2·5	M	W	.....	14 30 27·03	+0·03	.....	−14 49 40·0	+0·8
5·5	CS	W	.....	14 42	.....	N	−15 45 20·5	+3·7
7·5	HS	W	.....	14 50 17·51	+0·03	.....	−16 21 17·9	−1·9
9·5	CS	W	E	14 58 19·66	+0·01	S	−16 56 4·9	−2·4
10·5	M	W	.....	15 2 22·09	+0·06	.....	−17 13 0·1	−0·1
13·5	RM	W	E	15 14 34·30	+0·01	S	−18 2 3·8	+0·9
14·5	CS	W	.....	15 19	.....	.....	−18 17 50·2	−1·1
15·5	RM	W	W	15 22 46·85	+0·16	.....	−18 33	.....
27·5	RM	W	.....	16 13	.....	.....	−21 10 45·6	+2·3
Dec. 1·5	RM	W	.....	16 30 20·28	−0·04	.....	−21 51	.....
6·5	M	W	.....	16 52	.....	.....	−22 31 49·1	+2·8
10·5	RM	W	W	17 9 36·91	−0·10	.....	−22 56 38·8	+0·6
14·5	RM	W	.....	17 27 16·51	+0·07	.....	−23 14 10·6	+0·9
15·5	M	W	.....	17 31 42·22	+0·15	.....	−23 17 23·9	+1·3
19·5	RM	W	.....	17 49 26·68	+0·08	.....	−23 26	.....
24·5	CS	W	.....	18 12	.....	.....	−23 25 20·9	+0·5
1929								
Jan 2·5	HS	W	.....	18 52	.....	.....	−22 55 10·8	+5·9
4·5	RM	W	.....	19 0 19·57	+0·24	.....	−22 43 27·1	+4·2
5·5	HS	E	.....	19 4 43·03	−0·03	.....	−22 36 56·0	+1·8
7·5	M	E	E	19 13 29·14	−0·01	.....	−22 22 26·3	+4·2
8·5	RM	E	.....	19 18	.....	.....	−22 14 37·4	−0·5
9·5	HS	E	.....	19 22 13·41	+0·09	.....	−22 6 12·9	+4·2
12·5	HS	E	.....	19 35 15·49	+0·07	.....	−21 38 40·3	+2·6
16·5	HS	E	.....	19 52 29·51	+0·15	.....	−20 56 5·5	+0·6
19·5	HS	E	.....	20 5	.....	.....	−20 19 56·3	−0·1
22·5	RM	E	.....	20 18	.....	.....	−19 40 18·8	+1·6
24·5	M	E	.....	20 26 22·13	+0·04	.....	−19 12 25·9	+4·2
26·5	HS	E	.....	20 34 42·45	+0·01	.....	−18 42 26·9	+1·7
28·5	M	E	.....	20 43	.....	.....	−18 11 26·3	+2·8
Feb. 2·5	RM	E	.....	21 3 28·26	−0·09	.....	−16 48 24·2	−0·6
11·5	HS	W	.....	21 39 29·65	−0·02	.....	−14 0 46·6	+4·2
12·5	M	W	.....	21 43 25·98	+0·10	.....	−13 40 54·9	+3·8
16·5	RM	W	.....	21 59 3·21	+0·19	.....	−12 19	.....
18·5	HS	W	.....	22 6 47·21	+0·06	.....	−11 37 18·3	+1·1
22·5	M	W	W	22 21 6·95	−0·09	.....	−10 11 9·7	+1·1
23·5	RM	W	.....	22 25 55·17	−0·21	.....	− 9 49	.....
Mar. 6·5	M	W	.....	23 7 11·05	−0·07	.....	− 5 39 31·3	−0·2
8·5	HS	W	.....	23 15	.....	N	− 4 52 46·2	+4·8
9·5	M	W	.....	23 18	.....	.....	− 4 29 23·2	+1·9
18·5	RM	W	.....	23 51 16·85	−0·04	.....	− 0 56 39·8	+2·9
19·5	HS	W	.....	23 54 55·77	+0·12	.....	− 0 32 59·4	+0·5

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	22·5	HS	W	.....	0	5	51·15	+0·06	.....	+ 0	38	5·3	+0·9
	26·5	HS	W	.....	0	20	23·77	+0·05	.....	+ 2	12	28·6	+0·7
April	2·5	RM	W	.....	0	45	51·39	−0·08	.....	+ 4	55	40·7	+1·7
	3·5	HS	W	E	0	49	30·32	+0·20	.....	+ 5	18	42·5	+2·5
	4·5	M	W	.....	0	53	9·00	+0·04	.....	+ 5	41	35·9	+0·5
	9·5	RM	W	.....	1	11	26·21	+0·09	.....	+ 7	34	36·5	−1·6
	10·5	HS	W	.....	1	15	6·36	+0·11	.....	+ 7	56	55·2	+2·0
	11·5	M	W	.....	1	18	46·61	−0·07	.....	+ 8	19	1·8	+1·5
	20·5	HS	W	.....	1	52	4·71	+0·07	.....	+11	31	6·2	+2·0
	22·5	M	W	.....	1	59	32·88	+0·10	.....	+12	11	48·0	+0·6
	24·5	HS	W	.....	2	3	2·66	−0·04	.....	+12	51	44·8	+1·9
	29·5	M	W	E	2	24	56·02	−0·08	.....	+14	27	45·5	+1·1
	30·5	RM	W	.....	2	27	44·43	+0·08	S	+14	46	15·1	−0·4
May	6·5	HS	W	.....	2	53		.....	S	+16	32	9·1	+2·7
	10·5	M	E	.....	3	8	17·88	−0·00	.....	+17	37	16·4	−0·1
	13·5	HS	E	.....	3	20	3·15	+0·05	.....	+18	23	4·3	+0·2
	16·5	HS	E	.....	3	31	53·34	+0·02	.....	+19	6	4·5	+0·7
	17·5	M	E	.....	3	35	51·12	−0·04	.....	+19	19	45·9	+0·7
	20·5	HS	E	.....	3	47	48·00	+0·06	.....	+19	58	50·4	+0·4
	22·5	RM	E	.....	3	56	48·50	+0·03	.....	+20	23	9·6	−1·6
	23·5	HS	E	.....	4	0		.....	.....	+20	34	50·2	−0·5
	25·5	RM	E	.....	4	7	53·19	+0·00	.....	+20	57	5·8	+0·0
	27·5	HS	E	.....	4	16	58·89	+0·02	.....	+21	17	54·3	−0·3
	28·5	M	E	.....	4	20		.....	.....	+21	27	44·6	−1·4
	29·5	RM	E	.....	4	24		.....	.....	+21	37	15·2	−0·2
	30·5	HS	E	.....	4	27	11·01	−0·04	.....	+21	46	21·7	−0·5
	31·5	M	E	.....	4	32		.....	.....	+21	55	7·5	+1·0
June	1·5	RM	E	.....	4	36	21·41	−0·00	.....	+22	3	28·9	+0·2
	4·5	HS	E	.....	4	49		.....	.....	+22	26	13·8	−0·1
	10·5	RM	W	.....	5	13	26·72	+0·04	.....	+23	1	7·1	+0·6
	11·5	RM	W	.....	5	18		.....	.....	+23	5	32·4	+1·7
	12·5	M	W	.....	5	21	44·18	−0·02	.....	+23	9	31·8	+1·3
	17·5	RM	W	.....	5	42	30·22	−0·23	.....	+23	23		.....
	18·5	HS	W	.....	5	46	40·07	+0·08	.....	+23	24	53·1	+1·0
	19·5	M	W	W	5	50	49·49	−0·01	S	+23	25	59·3	+0·3
	21·5	HS	W	E	5	59	8·70	+0·08	.....	+23	26	58·5	−0·1
	22·5	M	W	.....	6	3		.....	.....	+23	26	53·4	+2·2
	24·5	RM	W	.....	6	11	37·00	−0·05	.....	+23	25	24·9	+2·7
	26·5	M	W	.....	6	20		.....	.....	+23	22	14·5	+0·3
	27·5	RM	W	W	6	24	4·53	+0·16	.....	+23	20	3·0	−0·3
	29·5	RM	W	.....	6	32	22·58	+0·16	.....	+23	14	27·5	−0·5
July	2·5	CS	W	.....	6	44	47·63	+0·11	.....	+23	3		.....
	3·5	RM	W	.....	6	48	55·40	−0·01	.....	+22	58	23·5	−0·8
	5·5	RM	E	.....	6	57		.....	.....	+22	47	56·6	−1·1
	9·5	RM	E	.....	7	14		.....	.....	+22	22	18·8	−0·7

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
10·5	RM	E	.....	7 18	.....	S	+22 14 56·3	−0·2
11·5	M	E	.....	7 22	.....	.....	+22 7 12·4	+1·8
12·5	RM	E	.....	7 25 50·96	+0·13	.....	+21 59 1·7	−0·2
15·5	RM	E	.....	7 38 1·40	+0·03	.....	+21 32 20·8	+0·0
16·5	RM	E	.....	7 42 3·93	+0·06	.....	+21 22 44·5	+1·5
17·5	HS	E	.....	7 46 5·88	+0·06	.....	+21 12 42·1	−1·2
19·5	RM	E	.....	7 54 8·18	+0·06	.....	+20 51 39·5	−0·2
20·5	HS	E	.....	7 58 8·43	−0·01	.....	+20 40 35·7	−0·5
22·5	M	E	.....	8 6	.....	.....	+20 17 28·6	+1·7
23·5	RM	E	.....	8 10	.....	.....	+20 5 22·4	+0·8
25·5	M	E	.....	8 18 1·66	+0·11	.....	+19 40 11·2	+0·4
26·5	RM	E	.....	8 21 58·43	−0·02	.....	+19 27 6·1	+0·2
31·5	HS	E	.....	8 41 34·21	+0·02	.....	+18 16 55·6	−0·5
Aug. 2·5	HS	E	.....	8 49 20·49	+0·10	.....	+17 46 44·6	+0·5
7·5	RM	E	.....	9 8 35·48	+0·09	.....	+16 26 13·9	+0·2
9·5	M	E	.....	9 16 13·19	+0·02	.....	+15 52 8·5	+0·3
12·5	HS	E	.....	9 27 35·33	−0·04	.....	+14 59 6·6	+0·0
16·5	M	E	.....	9 42 36·95	+0·01	.....	+13 45 7·2	+0·9
17·5	RM	E	.....	9 46 21·02	+0·04	.....	+13 26	.....
19·5	HS	E	.....	9 53 47·48	−0·02	.....	+12 47	.....
20·5	M	E	.....	9 57 30·21	+0·18	.....	+12 27 37·8	+0·1
21·5	RM	E	.....	10 1 12·12	+0·06	.....	+12 7 45·0	−0·3
22·5	M	E	.....	10 4 53·71	+0·08	.....	+11 47 41·4	+0·0
24·5	RM	E	.....	10 12 15·61	+0·11	.....	+11 6 59·1	−1·0
26·5	HS	E	.....	10 19 35·81	+0·08	.....	+10 25 36·3	+0·0
29·5	HS	E	.....	10 30 33·31	+0·03	.....	+ 9 22 14·2	−2·0
30·5	M	E	.....	10 34 11·67	−0·10	.....	+ 9 0 50·5	−0·5
31·5	RM	E	.....	10 37 49·81	−0·14	.....	+ 8 39 15·7	−1·2
Sept. 3·5	HS	E	.....	10 48 42·84	+0·07	.....	+ 7 33 43·0	−2·4
4·5	M	W	.....	10 52 19·96	+0·15	.....	+ 7 11 38·6	−1·2
5·5	RM	W	.....	10 55 56·67	+0·07	.....	+ 6 49 26·8	−0·2
9·5	RM	W	.....	11 10 21·64	+0·07	.....	+ 5 19 32·5	−0·5
11·5	RM	W	.....	11 17 33·06	+0·09	.....	+ 4 34 3·8	+0·9
12·5	RM	W	.....	11 21 8·38	−0·06	.....	+ 4 11 10·5	−0·2
16·5	RM	W	.....	11 35 29·58	+0·07	.....	+ 2 39	.....
20·5	HS	W	.....	11 50	.....	N	+ 1 6 5·8	−0·1
21·5	M	E	E	11 53 25·56	+0·10	.....	+ 0 42 46·9	+0·4
23·5	RM	E	.....	12 1	.....	.....	− 0 3 54·8	+1·5
24·5	HS	W	.....	12 4 12·03	+0·06	.....	− 0 27 18·8	+0·2
30·5	RM	E	.....	12 25 49·83	−0·10	.....	− 2 47 37·9	−2·8
Oct. 1·5	HS	E	W	12 29 27·02	−0·11	.....	− 3 10 55·8	−1·4
5·5	HS	W	E	12 43 59·11	+0·11	.....	− 4 43 46·8	+0·5
7·5	RM	W	.....	12 51 17·07	+0·04	.....	− 5 29 56·6	−2·5
8·5	M	W	.....	12 55	.....	.....	− 5 52 47·5	+3·8
10·5	RM	W	.....	13 2 17·05	−0·05	.....	− 6 38 30·2	+0·9

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
11·5	M	W	.....	13 6	.....	S	− 7 1 16·5	−3·5
14·5	RM	W	E	13 18 3·61	−0·02	S	− 8 8 44·4	−1·9
15·5	M	E	.....	13 20 46·69	+0·17	.....	− 8 30 59·8	−0·8
18·5	HS	E	.....	13 31 58·62	−0·02	.....	− 9 37 2·7	+0·7
26·5	HS	E	.....	14 2 19·32	−0·01	.....	−12 26 42·4	−1·4
28·5	M	E	.....	14 10 1·54	−0·18	.....	−13 7 18·8	+0·6
Nov. 5·5	CS	E	.....	14 41 22·78	+0·03	.....	−15 41 10·6	−0·6
7·5	CS	W	.....	14 49 21·19	+0·09	.....	−16 17	.....
16·5	CS	W	E	15 25 54·94	+0·10	.....	−18 44 45·9	−0·2
22·5	HS	W	.....	15 50 55·06	+0·04	.....	−20 9	.....
25·5	HS	W	.....	16 3 36·09	−0·10	.....	−20 45 24·0	+4·4
28·5	CS	W	.....	16 16 24·37	+0·05	.....	−21 18 56·4	+2·5
29·5	HS	W	.....	16 20 41·79	−0·03	.....	−21 29 17·9	+3·2
Dec. 7·5	M	W	.....	16 55 24·84	+0·10	.....	−22 37	.....
11·5	RM	W	.....	17 12 58·81	+0·19	.....	−23 0 31·4	+4·5
16·5	RM	W	.....	17 35 3·97	+0·00	.....	−23 19 30·7	+3·7
20·5	RM	W	E	17 52 48·39	−0·05	.....	−23 26 23·1	+0·3
30·5	M	W	.....	18 37 12·13	−0·04	.....	−23 10 29·4	−0·5
1930								
Jan. 4·5	RM	E	.....	18 59 17·01	+0·10	.....	−22 44 59·2	+3·5
10·5	CS	E	.....	19 25 32·51	+0·10	.....	−21 59 38·5	.....
11·5	RM	E	.....	19 29 53·34	+0·26	.....	−21 50 31·4	+3·3
13·5	CS	E	.....	19 38 32·61	+0·04	.....	−21 31 9·2	−1·1
16·5	RM	E	.....	19 51	.....	.....	−20 58 48·1	+4·4
22·5	CS	E	.....	20 16 57·12	−0·01	.....	−19 43 39·6	+2·3
23·5	RM	E	.....	20 21 9·63	+0·05	.....	−19 29 50·4	+0·6
25·5	RM	E	.....	20 29 32·28	+0·09	.....	−19 1	.....
27·5	CS	E	.....	20 37 51·61	+0·01	.....	−18 30 53·3	+0·7
29·5	CS	E	.....	20 46 7·82	−0·01	.....	−17 59 20·9	+2·2
30·5	RM	E	.....	20 50 14·67	−0·03	.....	−17 43 6·1	+2·3
Feb. 5·5	M	E	.....	21 14 38·61	+0·09	.....	−15 59 15·7	+1·5
6·5	HS	E	.....	21 19	.....	.....	−15 40 43·6	+5·2
8·5	HS	E	.....	21 26 39·15	−0·05	.....	−15 3 34·3	+0·3
10·5	M	E	.....	21 35	.....	.....	−14 25 8·6	+1·3
11·5	HS	W	.....	21 39	.....	.....	−14 5 32·8	+3·3
14·5	M	W	E	21 50 19·53	+0·66	.....	−13 5 29·4	+2·9
17·5	M	W	.....	22 1 58·66	+0·06	.....	−12 3 30·7	+3·5
19·5	M	W	.....	22 9 41·70	+0·09	.....	−11 21 17·8	−0·8
24·5	M	W	.....	22 28 47·91	+0·05	.....	− 9 32 31·9	+0·9
27·5	HS	W	.....	22 40 8·37	−0·02	.....	− 8 25 30·2	+0·4
28·5	M	W	.....	22 43 54·08	−0·06	.....	− 8 2 53·6	+0·8
Mar. 3·5	RM	W	.....	22 55 8·27	+0·08	.....	− 6 54 22·6	+2·6
4·5	CS	W	E	22 58 52·02	+0·15	.....	− 6 31 20·2	+3·2
5·5	RM	W	E	23 2 35·18	+0·08	.....	− 6 8 15·0	+1·2

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	6·5	CS	W	.....	23	6	17·87	+0·01	.....	− 5	45	3·2	+1·0
	7·5	RM	W	.....	23	10	0·31	+0·12	.....	− 5	21	47·7	−0·2
	10·5	RM	W	.....	23	21	4·83	+0·10	.....	− 4	11	34·4	+0·0
	14·5	RM	W	.....	23	35	46·17	+0·25	.....	− 2	37	15·3	+1·2
	15·5	HS	W	.....	23	39	25·48	−0·04	.....	− 2	13	35·5	+1·7
	20·5	CS	W	.....	23	57	40·56	+0·14	.....	− 0	15	7·6	+0·8
	21·5	RM	W	.....	0	1	19·02	+0·08	.....	+ 0	8	35·1	+1·8
	22·5	CS	W	.....	0	4	57·31	−0·06	S	+ 0	32	15·8	+1·2
April	2·5	HS	W	.....	0	44	58·92	+0·04	.....	+ 4	50	8·0	+0·4
	4·5	HS	E	.....	0	52	16·27	−0·06	.....	+ 5	36	8·3	+1·0
	9·5	HS	E	.....	1	10	32·83	+0·06	.....	+ 7	29	15·3	+0·1
	11·5	HS	E	.....	1	17	52·98	+0·09	.....	+ 8	13	39·1	+0·2
	12·5	M	E	.....	1	22		.....	.....	+ 8	35	40·4	+1·9
	14·5	HS	E	.....	1	28	55·17	−0·01	.....	+ 9	19	10·9	−0·7
	16·5	HS	E	.....	1	36	18·36	−0·02	.....	+10	2	7·0	−0·7
	22·5	M	E	.....	1	58	37·53	+0·01	.....	+12	6	50·0	+0·3
	23·5	HS	E	.....	2	2	22·28	+0·04	.....	+12	26	58·0	+0·7
	28·5	HS	E	.....	2	21	13·24	+0·02	.....	+14	4	27·2	+1·1
	29·5	M	E	.....	2	25		.....	.....	+14	23	15·4	−0·2
	30·5	HS	E	.....	2	28	49·18	+0·01	.....	+14	41	50·5	−0·3
May	1·5	RM	E	.....	2	32	38·09	+0·17	.....	+15	0	14·6	+3·1
	2·5	CS	E	E	2	36	27·30	+0·10	.....	+15	18	17·8	+0·6
	5·5	CS	E	.....	2	47	58·32	+0·11	.....	+16	11	0·8	−0·9
	6·5	RM	W	.....	2	51	49·92	+0·29	.....	+16	28		.....
	8·5	RM	W	.....	2	59	34·25	+0·14	.....	+17	2	19·7	−0·6
	9·5	CS	W	.....	3	3	27·31	+0·13	.....	+17	17	33·2	+0·5
	10·5	RM	W	.....	3	7	20·71	−0·11	.....	+17	33	26·8	−1·0
	12·5	CS	W	.....	3	15	9·84	+0·04	.....	+18	4	24·8	+0·1
	13·5	RM	W	.....	3	19	5·24	+0·09	.....	+18	19	25·0	−1·1
	17·5	RM	W	.....	3	34	52·40	+0·06	S	+19	16	26·0	+1·2
	22·5	RM	W	.....	3	54	49·36	+0·08	.....	+20	20		.....
	23·5	M	W	.....	3	58	50·40	+0·05	.....	+20	32		.....
	26·5	CS	W	.....	4	11		.....	.....	+21	5	11·1	+0·2
	31·5	RM	W	.....	4	31	17·07	−0·05	.....	+21	53	4·8	−0·7
June	2·4	M	W	.....	4	39	28·23	+0·04	.....	+22	9	36·8	+0·3
	4·5	CS	W	.....	4	47	40·76	−0·02	.....	+22	24	34·2	−0·3
	5·5	M	E	.....	4	51	47·54	−0·03	.....	+22	31	29·9	+1·6
	7·5	M	E	W	5	0	2·16	+0·04	.....	+22	44	3·2	−1·4
	11·5	CS	E	.....	5	16	34·42	−0·03	.....	+23	4	29·9	.....
	12·5	M	E	.....	5	20	43·11	−0·01	.....	+23	9		.....
	13·5	CS	E	.....	5	24	52·01	+0·03	.....	+23	12	15·4	−0·5
	14·5	CS	E	.....	5	29	1·03	+0·01	.....	+23	15	32·6	+0·0
	19·5	M	E	.....	5	49	48·22	+0·05	.....	+23	26		.....
	23·5	HS	E	.....	6	6	26·07	−0·82	.....	+23	26	31·5	−0·2
	28·5	CS	E	.....	6	27	13·95	+0·04	.....	+23	18	9·9	−0·3

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	30·5	HS	E	.....	6	35	31·63	+0·08	.....	+23	11	56·3	−0·8
July	2·5	CS	E	E	6	43	48·17	−0·04	.....	+23	4	5·9	−0·5
	3·5	RM	E	.....	6	47	56·15	+0·04	.....	+22	59	34·3	−0·4
	4·5	HS	E	.....	6	52		.....	.....	+22	54	38·9	−0·0
	5·5	HS	E	.....	6	56	10·95	+0·00	.....	+22	49	18·2	−0·9
	7·5	RM	E	.....	7	4		.....	.....	+22	37	27·2	−1·5
	8·5	CS	W	.....	7	8		.....	.....	+22	30	58·1	+0·1
	10·5	RM	W	.....	7	16	41·77	+0·11	.....	+22	16	47·1	+0·1
	11·5	CS	W	.....	7	20	46·71	+0·12	.....	+22	9	7·9	+1·0
	15·5	CS	W	.....	7	37	1·98	+0·17	.....	+21	34	40·7	+0·4
	16·5	HS	W	.....	7	41	4·61	+0·17	.....	+21	25	9·7	+1·7
	17·5	RM	W	.....	7	49	6·66	+0·11	.....	+21	15	13·6	−0·3
	19·5	HS	W	.....	7	53		.....	.....	+20	54	21·9	+1·3
	23·5	HS	W	.....	8	9	8·39	+0·03	.....	+20	8	21·3	+0·1
	29·5	CS	W	.....	8	33		.....	.....	+18	49	19·9	−0·1
	31·5	CS	W	E	8	40	38·45	−0·11	N	+18	20	28·8	+0·8
Aug.	1·5	CS	W	.....	8	44	32·18	+0·12	.....	+18	5	35·9	+0·9
	2·5	HS	E	.....	8	48	25·07	+0·15	.....	+17	50	25·0	+0·7
	5·5	M	E	E	8	59	59·85	+0·07	.....	+17	3	9·0	−0·4
	6·5	M	E	.....	9	3	50·16	−0·01	.....	+16	46	51·2	+0·2
	8·5	RM	E	.....	9	11	29·22	+0·10	.....	+16	13	24·9	−1·0
	9·5	M	E	W	9	15	17·87	+0·14	N	+15	56	21·3	+1·4
	12·5	RM	E	.....	9	26	40·09	+0·03	.....	+15	3	31·9	+0·9
	13·5	M	E	.....	9	30	26·39	−0·00	.....	+14	45	25·7	+0·3
	15·5	RM	E	.....	9	37	57·36	−0·09	.....	+14	8	30·2	−1·8
	16·5	M	E	W	9	41	42·29	+0·11	.....	+13	49	44·3	−0·5
	21·5	CS	E	.....	10	0	18·65	+0·11	.....	+12	13		.....
	22·5	RM	E	E	10	4	0·56	+0·16	.....	+11	52		.....
	25·5	CS	E	.....	10	15	3·45	+0·12	.....	+10	51	20·0	+0·2
	26·5	RM	E	.....	10	18	43·50	+0·06	.....	+10	30	33·8	−0·8
	29·5	RM	W	.....	10	29	41·43	+0·05	.....	+ 9	27	19·9	+0·2
	30·5	M	W	.....	10	33	19·94	+0·01	.....	+ 9	5	55·2	−1·3
Sept.	2·5	HS	W	.....	10	44		.....	.....	+ 8	0	55·5	−0·9
	3·5	RM	W	.....	10	47	50·82	+0·03	.....	+ 7	39	0·6	−0·1
	4·5	M	W	.....	10	51	27·77	+0·02	.....	+ 7	16	55·9	−1·6
	5·5	HS	W	.....	10	55	4·53	+0·06	.....	+ 6	54	47·9	+0·3
	6·5	RM	W	.....	10	58	41·21	+0·28	.....	+ 6	32	32·1	+0·2
	8·5	M	W	.....	11	6		.....	S	+ 5	47	39·4	+1·0
	19·5	HS	W	.....	11	45	23·09	+0·10	.....	+ 1	35	0·0	−1·5
	22·5	M	W	.....	11	56	9·24	−0·02	.....	+ 0	25	0·7	−0·5
	23·5	HS	W	.....	11	59	44·94	+0·08	.....	+ 0	1	37·7	−0·7
	24·5	RM	W	.....	12	3	20·67	+0·10	.....	− 0	22		.....
Oct.	1·5	RM	W	.....	12	28	35·39	+0·15	.....	− 3	5	23·0	−0·9
	3·5	RM	W	.....	12	35	50·31	+0·19	.....	− 3	51	53·8	−0·5
	4·5	CS	W	.....	12	39	28·62	+0·11	.....	− 4	15	4·7	+0·3

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
6·5	RM	W	.....	12 46 44·99	+0·14	.....	− 5 1 18·7	−0·2
7·5	CS	E	.....	12 50 23·88	+0·07	.....	− 5 24 19·7	+0·1
10·5	RM	E	.....	13 1 23·22	−0·04	.....	− 6 32 57·6	+0·1
13·5	RM	E	.....	13 12 27·01	+0·06	.....	− 7 40 48·0	+1·1
14·5	CS	E	.....	13 16 9·41	+0·18	.....	− 8 3 14·3	−0·1
15·5	RM	E	.....	13 19 52·20	+0·15	.....	− 8 25 33·8	−0·9
22·5	RM	E	.....	13 46 8·86	+0·02	.....	−10 58 4·2	+1·8
23·5	CS	E	.....	13 49 56·75	+0·07	.....	−11 19 17·0	+0·6
24·5	RM	E	.....	13 53 45·37	+0·18	.....	−11 40 18·3	+0·6
25·5	M	E	.....	13 58	.....	.....	−12 1 10·4	−0·9
30·5	CS	E	.....	14 16 51·29	+0·03	.....	−13 42 27·9	−0·5
31·5	RM	E	W	14 20 44·90	+0·04	.....	−14 2 7·3	−2·1
Nov. 3·5	CS	E	E	14 32 30·34	−0·04	.....	−14 59 37·9	−2·4
4·5	M	E	.....	14 36 27·26	+0·10	.....	−15 18 18·3	−1·2
11·5	M	E	.....	15 4 28·09	+0·17	.....	−17 21 39·8	+2·8
21·5	HS	E	.....	15 45 42·38	+0·17	.....	−19 52 16·1	−0·8
24·5	CS	E	.....	15 58 20·90	+0·25	.....	−20 30 33·6	+4·8
27·5	M	E	.....	16 11 6·11	+0·18	.....	−21 5 34·1	+1·4
Dec. 2·5	RM	W	.....	16 33	.....	.....	−21 55 47·5	+2·2
4·5	RM	W	.....	16 41 15·79	+0·22	.....	−22 12 57·5	+2·7
10·5	M	W	.....	17 7 29·57	+0·17	.....	−22 54 2·4	+2·8
16·5	RM	W	.....	17 33 58·96	+0·02	.....	−23 18 55·9	+0·7
17·5	M	W	.....	17 38 24·96	+0·03	.....	−23 21 26·3	+1·7
22·5	M	W	.....	18 0 37·26	+0·01	.....	−23 27 0·4	+1·4
1931								
Jan. 7·5	M	W	.....	19 11 22·57	+0·17	.....	−22 26 8·7	+2·8
8·5	HS	W	.....	19 15 44·99	+0·14	.....	−22 18 28·0	+2·8
14·5	M	W	.....	19 41 48·37	+0·02	.....	−21 23 20·2	+2·8
15·5	HS	W	.....	19 46	.....	.....	−21 12 36·9	+6·3
20·5	HS	W	.....	20 7 29·14	+0·07	.....	−20 13 20·3	+3·5
22·5	HS	W	.....	20 16	.....	.....	−19 46 52·4	+5·6
23·5	M	W	.....	20 20	.....	.....	−19 33 10·0	+1·8
24·5	HS	E	.....	20 24	.....	.....	−19 18 58·5	+5·5
31·5	HS	E	E	20 53 21·69	+0·07	.....	−17 30 32·9	+2·3
Feb. 2·5	RM	E	.....	21 1 31·49	+0·13	.....	−16 56 39·4	+3·5
3·5	CS	E	.....	21 5 35·17	+0·20	.....	−16 39 21·5	−1·7
4·5	RM	E	.....	21 9 37·93	+0·15	.....	−16 21 37·7	+1·8
6·5	RM	E	.....	21 18	.....	.....	−15 45 23·7	+4·5
7·5	CS	E	.....	21 21 41·54	+0·15	.....	−15 26 53·4	+4·7
10·5	CS	E	.....	21 33 38·15	+0·21	.....	−14 29 50·7	+3·5
11·5	RM	E	.....	21 37 35·50	+0·25	.....	−14 10 21·2	+2·0
21·5	CS	E	.....	22 16 28·12	+0·23	.....	−10 43 21·4	+1·5
23·5	HS	E	.....	22 24 5·27	+0·17	.....	− 9 59 43·7	+2·8
25·5	CS	E	.....	22 31 41·77	+0·02	.....	− 9 15 33·7	+0·4
27·5	HS	E	.....	22 39 14·99	+0·01	.....	− 8 30 48·3	+0·9

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	28·5	CS	E	.....	22	43	0·82	+0·09	.....	− 8	8	13·2	+2·0
Mar.	2·5	M	E	.....	22	50	30·60	+0·01	.....	− 7	23		.....
	3·5	M	E	.....	22	54	14·89	+0·13	.....	− 6	59	53·0	+0·5
	5·5	M	E	.....	23	1	41·60	−0·05	.....	− 6	13	46·7	+2·6
	7·5	M	W	.....	23	9	6·78	+0·00	.....	− 5	27	23·8	+0·5
	13·5	HS	W	.....	23	31	13·60	+0·10	.....	− 3	6	32·4	+1·5
	14·5	M	W	.....	23	35		.....	.....	− 2	42	56·2	−0·6
	19·5	M	W	.....	23	53		.....	.....	− 0	44	24·6	+0·4
	20·5	HS	W	.....	23	56	49·08	−0·16	.....	− 0	20	41·6	−0·7
	21·5	RM	W	.....	0	0	28·02	+0·12	.....	+ 0	3	2·4	+0·5
	23·5	HS	W	.....	0	7	45·01	+0·16	.....	+ 0	50	25·3	+0·5
April	4·5	RM	W	.....	0	51	24·32	+0·00	.....	+ 5	30	39·8	−0·2
	7·5	RM	W	W	1	2	21·63	+0·29	.....	+ 6	38	56·8	+0·1
	8·5	M	W	.....	1	6	0·75	+0·01	.....	+ 7	1	29·6	+0·2
	9·5	RM	W	.....	1	9	40·53	+0·10	.....	+ 7	23	53·9	−1·1
	14·5	RM	E	.....	1	28	3·21	+0·15	.....	+ 9	14	5·3	−0·3
	15·5	CS	E	.....	1	31	44·66	+0·12	.....	+ 9	36		.....
	16·5	RM	E	.....	1	35	26·54	+0·16	.....	+ 9	57	8·6	−0·2
	17·5	CS	E	.....	1	39	8·67	+0·07	.....	+10	18	26·2	+0·5
	18·5	RM	E	.....	1	42	51·26	+0·06	.....	+10	39	32·7	+0·4
	20·5	CS	E	.....	1	50	17·57	+0·03	.....	+11	21	14·0	+0·2
	21·5	RM	E	.....	1	54	1·51	+0·17	.....	+11	41	49·1	+1·4
	22·5	CS	E	.....	1	57	45·58	+0·03	.....	+12	2	11·2	+0·9
	24·5	CS	E	.....	2	5	15·42	+0·15	.....	+12	42	19·6	+1·0
May	1·5	M	E	.....	2	31	44·08	+0·04	.....	+14	56		.....
	2·5	HS	E	.....	2	35	33·08	+0·05	.....	+15	14		.....
	4·5	M	E	.....	2	43	12·73	+0·06	.....	+15	49	34·4	+0·8
	5·5	HS	E	.....	2	47	3·47	+0·14	.....	+16	6	54·6	−1·3
	6·5	M	W	.....	2	50	54·51	−0·04	.....	+16	24	3·2	+0·8
	9·5	HS	W	.....	3	2	31·89	+0·14	.....	+17	13	44·6	+1·4
	12·5	HS	W	.....	3	14	14·32	+0·06	.....	+18	0	50·1	+0·3
	14·5	HS	W	.....	3	22	5·64	+0·08	.....	+18	30	45·3	+0·9
	15·5	M	W	.....	3	26	2·09	+0·01	.....	+18	45	13·9	+0·0
	18·5	M	W	.....	3	37	55·07	−0·04	.....	+19	26	48·3	+1·0
	19·5	HS	W	.....	3	41	54·05	+0·13	.....	+19	40	0·2	+1·2
	20·5	M	W	.....	3	45	53·30	+0·04	.....	+19	52	52·0	+1·1
	21·5	HS	W	.....	3	49	53·29	+0·14	.....	+20	5	23·8	+1·5
	26·5	HS	W	.....	4	10	0·36	+0·14	.....	+21	2	44·5	+0·1
	27·5	M	W	.....	4	14	3·13	+0·03	.....	+21	13	9·4	+1·1
	28·5	HS	W	.....	4	18	6·55	+0·11	.....	+21	23	10·3	+0·1
	29·5	M	W	.....	4	22	10·15	−0·08	.....	+21	32	48·6	−1·3
	30·5	HS	W	.....	4	26	14·55	+0·09	.....	+21	42	10·0	+2·8
June	1·5	RM	W	.....	4	34	24·27	+0·04	.....	+21	59	34·8	+0·7
	2·5	M	W	.....	4	38	29·90	+0·15	.....	+22	7	43·2	+0·1
	11·5	M	E	.....	5	15	35·63	+0·11	.....	+23	3	28·8	−0·0

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
12·5	RM	E	.....	5 19 44·38	+0·08	.....	+23 7 42·8	+2·4
13·5	M	E	.....	5 23 53·31	+0·05	.....	+23 11 29·1	+1·5
15·5	RM	E	.....	5 32 11·60	−0·14	.....	+23 17 49·4	+1·1
16·5	M	E	.....	5 36 21·36	+0·16	.....	+23 20	.....
17·5	RM	E	.....	5 40 30·69	−0·06	.....	+23 22 31·2	+0·9
19·5	RM	E	.....	5 48 50·07	+0·02	.....	+23 25 33·1	+0·0
23·5	M	W	.....	6 5 28·63	−0·01	.....	+23 26 40·4	+0·0
24·5	RM	W	.....	6 9 38·08	−0·07	.....	+23 25 55·8	+0·6
27·5	M	W	.....	6 22 5·96	+0·00	.....	+23 21 11·2	−0·2
29·5	M	W	.....	6 30 23·85	+0·14	.....	+23 15 59·4	+0·2
30·5	CS	W	.....	6 35	.....	.....	+23 12 46·1	−0·1
July 2·5	M	W	.....	6 42 48·87	+0·09	.....	+23 5 9·2	+1·5
4·5	RM	W	.....	6 51 4·19	−0·05	.....	+22 55 52·5	+0·1
6·5	RM	W	.....	6 59 18·60	+0·06	.....	+22 44 59·9	−1·3
16·5	RM	E	.....	7 40 7·55	+0·19	.....	+21 27	.....
17·5	RM	W	.....	7 44 9·86	+0·17	.....	+21 18	.....
21·5	M	W	.....	8 0 13·49	−0·13	.....	+20 34 46·1	+2·1
22·5	M	W	.....	8 4 13·11	−0·06	.....	+20 23 8·6	+0·1
24·5	M	W	.....	8 12 10·58	+0·10	.....	+19 58 57·0	+0·5
25·5	M	W	.....	8 16 8·22	−0·02	.....	+19 46 21·1	+0·6
29·5	HS	W	.....	8 31 53·39	+0·14	.....	+18 53	.....
31·5	HS	E	.....	8 39 42·16	+0·04	.....	+18 24	.....
Aug. 4·5	RM	E	.....	8 55 12·81	+0·10	.....	+17 23 3·8	+1·1
5·5	RM	E	.....	8 59 3·94	+0·06	.....	+17 7	.....
8·5	HS	W	.....	9 10 34·03	+0·14	.....	+16 17 32·2	−0·4
14·5	RM	W	.....	9 33 18·62	+0·06	.....	+14 31 28·9	−0·2
17·5	M	W	W	9 44 33·61	+0·19	.....	+13 35 15·6	+0·3
20·5	M	W	.....	9 55 43·52	+0·05	.....	+12 37 6·2	+0·4
21·5	RM	W	.....	9 59 25·87	+0·06	.....	+12 17 19·0	+0·4
22·5	CS	W	.....	10 3 7·69	+0·04	.....	+11 57 21·7	+2·0
26·5	M	W	.....	10 17 50·63	+0·17	.....	+10 35 35·2	+0·1
29·5	M	W	.....	10 29	.....	.....	+ 9 32 30·7	+0·4
Sept. 8·5	CS	W	.....	11 5 1·00	+0·06	.....	+ 5 53 7·9	+1·2
9·5	M	W	.....	11 8 36·95	−0·04	.....	+ 5 30 31·5	−0·5
10·5	RM	W	.....	11 12 12·84	−0·05	.....	+ 5 7 51·4	−0·2
11·5	CS	W	.....	11 15 48·72	+0·08	.....	+ 4 45 6·4	+0·4
12·5	M	W	.....	11 19 24·32	+0·04	.....	+ 4 22 15·4	+0·1
14·5	RM	W	E	11 26 35·29	+0·04	.....	+ 3 36 21·4	+0·6
15·5	CS	W	E	11 30 10·56	−0·05	.....	+ 3 13 17·3	−0·3
16·5	M	E	.....	11 33 46·01	+0·13	.....	+ 2 50 11·6	+0·6
19·5	M	E	.....	11 44 31·92	+0·33	.....	+ 1 40 34·6	+0·8
25·4	CS	E	E	12 6 3·94	−0·10	.....	− 0 40	.....
28·5	RM	E	E	12 16 52·04	+0·02	.....	− 1 49 37·0	+0·0
29·5	CS	E	.....	12 20 28·61	+0·18	.....	− 2 12 58·7	−0·0
30·5	M	E	E	12 24 5·13	+0·05	.....	− 2 36 20·6	−1·5

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
Oct.	1·5	RM	E	.....	12	27	42·03	+0·04	.....	− 2	59	39·7	−1·6
	2·5	M	E	.....	12	31	19·18	−0·03	.....	− 3	22	53·4	+2·1
	6·5	HS	W	.....	12	45	51·54	+0·12	.....	− 4	56		.....
	8·5	HS	W	.....	12	53	59·91	+0·09	.....	− 5	41	42·3	+0·1
	9·5	M	W	.....	12	56	49·76	+0·09	.....	− 6	4	38·4	−0·9
	13·5	HS	W	.....	13	11	33·69	+0·01	.....	− 7	35	27·5	−1·0
	19·5	M	W	.....	13	33	55·25	+0·04	.....	− 9	48	22·3	−0·3
	21·5	M	W	.....	13	41		.....	.....	−10	31	34·6	+0·5
	23·5	M	W	.....	13	49	1·54	+0·13	.....	−11	14	11·4	−0·7
	26·5	M	W	.....	14	0	28·10	−0·01	.....	−12	16	47·7	−1·0
	27·5	HS	W	.....	14	4	18·59	+0·14	.....	−12	37	16·7	−0·0
Nov.	7·5	CS	E	.....	14	47		.....	.....	−16	8	29·4	+0·3
	9·5	RM	E	.....	14	55		.....	.....	−16	43	37·9	+2·5
	17·5	CS	E	.....	15	28		.....	.....	−18	52	30·7	−1·5
	19·5	M	E	.....	15	36	20·44	+0·06	.....	−19	21		.....
	24·5	CS	E	.....	15	57	18·74	+0·04	.....	−20	27	38·8	−0·8
	28·5	CS	E	.....	16	14		.....	.....	−21	13	49·1	−0·4
Dec.	2·5	M	E	.....	16	32		.....	.....	−21	53	34·4	+1·8
	5·5	HS	E	E	16	44	32·94	+0·24	.....	−22	19	1·9	+1·7
	15·5	HS	E	.....	17	29		.....	.....	−23	15	7·0	+3·8
	19·5	HS	E	.....	17	49	13·38	+0·09	.....	−23	24	46·4	−0·9
	28·5	HS	W	.....	18	26		.....	.....	−23	18	49·6	+0·7
	29·5	HS	W	.....	18	30	36·84	+0·04	.....	−23	15	51·3	−1·3
	30·5	HS	W	E	18	35	2·70	+0·07	.....	−23	12	22·7	−1·1
	31·5	M	W	.....	18	39	28·30	+0·05	.....	−23	8	20·3	+5·1
1932													
Jan.	11·5	CS	W	.....	19	28	46·68	+0·02	.....	−21	54	59·4	+4·7
	14·5	RM	W	.....	19	40	46·52	+0·17	.....	−21	25	53·5	−1·3
	16·5	RM	W	.....	19	49	23·00	+0·14	.....	−21	4	17·5	+2·5
	19·5	RM	W	E	20	2	12·31	−0·04	.....	−20	29	0·2	+1·6
	22·5	CS	W	.....	20	14	55·24	+0·09	.....	−19	50	15·8	−0·6
	25·5	CS	W	W	20	27	31·11	+0·11	.....	−19	8	11·4	−1·5
	28·5	RM	W	.....	20	40		.....	.....	−18	22	55·5	−0·5
Feb.	1·5	HS	W	.....	20	56	27·11	+0·07	.....	−17	17	56·3	+1·0
	4·5	M	E	.....	21	8	39·07	+0·05	.....	−16	25	56·9	+2·3
	5·5	HS	E	.....	21	12	41·49	+0·09	.....	−16	8	3·5	+1·4
	6·5	M	E	.....	21	16	42·97	+0·02	.....	−15	49	53·5	+0·5
	9·5	M	E	.....	21	28	42·87	+0·10	.....	−14	53	42·0	+3·2
	12·5	HS	E	.....	21	40	38·46	+0·10	.....	−13	55	24·2	−2·6
	16·5	M	E	.....	21	56	14·67	+0·11	.....	−12	34	19·0	+1·7
	18·5	M	E	.....	22	4		.....	.....	−11	52	34·9	+1·8
	20·5	M	E	.....	22	11	42·13	+0·19	.....	−11	10	4·7	+3·2
	23·5	M	E	.....	22	23		.....	.....	−10	5	6·9	+1·4
	24·5	HS	E	W	22	26	58·56	+0·04	.....	− 9	43	8·0	+1·4
March	3·5	CS	W	.....	22	57	4·44	+0·24	.....	− 6	42	28·3	+2·0
	5·5	CS	W	.....	23	5		.....	.....	− 5	56	14·6	+0·8

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	11·5	RM	W	.....	23	26	40·75	+0·11	.....	− 3	35	44·8	+1·3
	12·5	CS	W	E	23	30	20·78	−0·28	.....	− 3	12		.....
	15·5	M	W	.....	23	41	20·59	+0·01	.....	− 2	1	11·2	+0·8
	16·5	RM	W	.....	23	45	0·22	+0·31	.....	− 1	37	27·1	+3·1
	17·5	M	W	.....	23	48	38·98	−0·03	.....	− 1	13	47·6	+0·2
	18·5	RM	W	.....	23	52	18·04	+0·14	.....	− 0	50	4·3	+1·0
	21·5	RM	W	.....	0	3	13·66	+0·07	.....	+ 0	21	1·8	+1·9
	23·5	M	W	.....	0	10	30·30	+0·18	.....	+ 1	8	19·8	+1·6
	24·5	M	W	.....	0	14	8·42	+0·13	.....	+ 1	31	55·3	+0·5
	29·5	M	W	.....	0	32	19·13	+0·07	.....	+ 3	29	20·3	+0·9
April	1·5	M	W	.....	0	43	14·17	−0·03	.....	+ 4	39	5·5	+2·3
	2·5	HS	W	.....	0	46	52·93	+0·10	.....	+ 5	2	9·6	+1·1
	4·5	M	W	.....	0	54	10·50	+0·01	.....	+ 5	48	5·4	+2·6
	5·5	HS	W	.....	0	57	49·65	+0·07	.....	+ 6	10	51·8	+0·7
	9·5	HS	W	.....	1	12	28·08	+0·12	.....	+ 7	40	56·9	+0·4
	14·5	CS	W	.....	1	30	51·77	+0·04	.....	+ 9	30	35·2	+0·7
	15·5	M	W	.....	1	34	33·36	−0·02	.....	+ 9	52	4·9	+2·1
	19·5	HS	W	.....	1	49	23·59	−0·01	.....	+11	16	13·2	−0·3
	20·5	M	W	.....	1	53	7·03	−0·10	.....	+11	36	50·0	+0·8
	21·5	HS	W	.....	1	56	51·15	+0·07	.....	+11	57	13·4	+0·0
	22·5	M	W	.....	2	0	35·36	−0·12	.....	+12	17	26·9	+1·1
	29·5	M	W	.....	2	26	59·91	−0·07	.....	+14	33	0·4	+0·8
May	3·5	HS	E	.....	2	42	17·05	−0·07	.....	+15	45	20·9	+0·5
	5·5	M	E	.....	2	49	58·99	−0·03	.....	+16	19	59·7	+1·2
	9·5	M	E	.....	3	6		.....	.....	+17	25	58·0	+1·3
	12·5	M	E	.....	3	17	13·39	−0·07	.....	+18	12	23·0	+0·8
	13·5	HS	E	.....	3	21	9·29	+0·11	.....	+18	27	15·8	+1·6
	14·5	RM	E	.....	3	25	5·43	−0·04	.....	+18	41	48·7	+1·1
	16·5	M	E	.....	3	32	59·70	−0·01	.....	+19	9	57·3	+0·3
	17·5	HS	E	.....	3	36	57·60	−0·04	.....	+19	23	33·5	+0·9
	18·5	RM	E	.....	3	40	56·06	−0·05	.....	+19	36	50·8	+2·2
	19·5	M	E	.....	3	44	55·07	−0·08	.....	+19	49	44·5	+0·1
	21·5	RM	E	.....	3	52	54·80	−0·04	.....	+20	14	37·9	+2·5
	23·5	M	E	.....	4	0	56·62	−0·08	.....	+20	38	4·6	+1·0
	30·5	M	E	.....	4	29	19·40	−0·02	.....	+21	48	55·6	+1·4
	31·5	HS	E	.....	4	33	24·49	−0·08	.....	+21	57	32·3	+0·0
June	1·5	RM	E	.....	4	37	30·11	−0·03	.....	+22	5	49·4	+1·9
	2·5	M	E	.....	4	41	36·10	−0·02	.....	+22	13	39·9	+0·2
	6·5	M	E	.....	4	58	3·61	−0·06	.....	+22	41	13·6	+0·1
	7·5	RM	E	.....	5	2	11·45	+0·09	.....	+22	47		.....
	11·5	M	E	.....	5	18	44·65	+0·02	.....	+23	7		.....
	13·5	M	W	.....	5	27	2·60	+0·16	.....	+23	14	3·4	+0·4
	15·5	CS	W	.....	5	35	20·76	−0·03	.....	+23	19	46·5	+0·7
	17·5	RM	W	.....	5	43	39·52	−0·01	.....	+23	23	50·3	+0·4
	18·5	CS	W	E	5	47	49·10	+0·10	.....	+23	25	15·8	+1·0

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	20·5	M	W	.....	5	56	8·07	+0·04	.....	+23	26	50·4	−0·2
July	5·5	CS	E	.....	6	58	19·06	+0·12	.....	+23	2	25·1	−0·1
	6·7	CS	E	.....	7	2	25·77	−0·02	.....	+22	40		.....
	8·5	RM	E	E	7	10	38·29	−0·03	.....	+22	27	26·9	+0·1
	9·5	M	E	E	7	14	43·91	−0·06	.....	+22	20	20·6	+0·1
	11·5	RM	E	.....	7	22	54·08	+0·12	.....	+22	4	59·8	+0·7
	16·5	M	E	W	7	43	10·52	+0·07	.....	+20	48	41·4	−0·2
	20·5	M	E	.....	7	59		.....	.....	+20	37	33·4	+0·8
	21·5	RM	E	.....	8	3	14·09	+0·15	.....	+20	26	2·1	−0·6
	29·5	CS	E	.....	8	34	50·44	−0·02	.....	+18	42	2·5	+0·1
Aug.	2·5	M	E	.....	8	50	24·71	+0·08	.....	+17	42	29·6	+0·2
	4·5	RM	E	.....	8	58	8·12	+0·05	.....	+17	10	58·7	+1·0
	6·5	HS	E	.....	9	5	49·19	+0·12	.....	+16	38	18·8	−0·3
	8·5	RM	E	.....	9	13	27·60	−0·03	.....	+16	5		.....
	9·5	HS	E	.....	9	17	16·03	+0·04	.....	+15	47		.....
	10·5	RM	E	.....	9	21	3·81	+0·04	.....	+15	30		.....
	11·5	HS	E	W	9	24	50·87	−0·07	.....	+15	12		.....
	15·5	RM	E	.....	9	40	54·00	+0·04	.....	+13	58	49·1	−0·3
	17·5	M	W	.....	9	44		.....	.....	+13	20	49·1	+0·0
	19·5	M	W	W	9	54	48·49	+0·00	.....	+12	42		.....
	20·5	HS	W	W	9	58	30·94	+0·04	.....	+12	22		.....
	22·5	RM	W	E	10	6	54·30	−0·08	.....	+11	42	11·7	+0·8
	23·5	M	W	.....	10	9	35·52	+0·08	.....	+11	21	51·6	−0·6
Sept.	2·5	HS	W	.....	10	46		.....	.....	+ 7	49	39·1	−1·1
	3·5	M	W	.....	10	50		.....	.....	+ 7	27	36·7	+3·2
	8·5	M	W	.....	11	7	45·09	+0·00	.....	+ 5	36		.....
	9·5	RM	W	.....	11	11	21·09	+0·16	.....	+ 5	13		.....
	10·5	M	W	.....	11	14	56·65	+0·03	.....	+ 4	51		.....
	12·5	RM	W	.....	11	22	7·70	+0·13	.....	+ 4	4	54·1	+0·1
	13·5	CS	W	.....	11	25	42·97	+0·08	.....	+ 3	41	57·4	+0·7
	14·5	RM	W	.....	11	29		.....	.....	+ 3	18	55·9	+0·2
	15·5	M	W	W	11	32	53·28	−0·04	.....	+ 2	55	51·6	+0·7
	16·7	CS	W	.....	11	36	28·57	+0·08	.....	+ 2	32	43·0	+0·3
	17·5	RM	W	.....	11	40	3·65	+0·01	.....	+ 2	9	29·7	−1·7
	20·5	CS	W	E	11	50	49·23	−0·06	.....	+ 0	59	41·3	−1·4
	21·5	RM	W	.....	11	54	24·81	+0·16	.....	+ 0	36	21·8	−0·6
	22·5	M	W	.....	11	58	0·22	+0·11	.....	+ 0	12	58·4	+2·4
	24·5	RM	W	.....	12	5	11·50	+0·07	.....	− 0	33	45·1	+0·5
	26·5	M	W	.....	12	12	23·46	+0·05	.....	− 1	21		.....
	28·5	M	W	E	12	19	36·16	−0·05	.....	− 2	7	21·3	−0·7
Oct.	3·5	RM	W	.....	12	37	42·83	+0·13	.....	− 4	3	54·8	−2·1
	4·5	M	W	.....	12	41	21·01	+0·11	.....	− 4	27	5·7	−2·0
	14·5	M	W	.....	13	18	4·96	+0·15	.....	− 8	14	51·3	−1·4
	15·5	CS	W	E	13	21	47·91	+0·05	.....	− 8	37		.....
	19·5	CS	W	.....	13	36	46·05	+0·11	.....	−10	4	47·7	−1·6

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
				h	m	s	s		°	′	″	″
22·5	CS	W	E	13	48	6·34	+0·12	.....	−11	9	2·1	−0·2
27·5	RM	W	.....	14	7	14·29	+0·13	.....	−12	52	43·5	+1·0
Nov. 3·5	CS	W	.....	14	34	33·44	+0·18	.....	−15	9	19·7	+0·3
4·5	RM	W	.....	14	38	30·61	+0·03	.....	−15	27	54·5	−0·2
5·5	M	E	.....	14	42	28·79	+0·08	.....	−15	46		.....
9·5	M	E	.....	14	58	29·51	+0·10	.....	−16	56	48·4	−2·1
17·5	CS	E	.....	15	31	11·42	+0·22	.....	−19	3	37·3	−0·4
18·5	RM	E	.....	15	35		.....	.....	−19	17	58·9	+1·8
22·5	RM	E	.....	15	52	4·82	−0·01	.....	−20	12	3·9	+0·2
26·5	M	E	.....	16	9	2·61	+0·23	.....	−21	0	10·0	+1·9
28·5	CS	E	.....	16	17	35·91	+0·22	.....	−21	21	55·3	+0·0
29·5	RM	E	.....	16	21	53·37	−0·04	.....	−21	32	9·1	+1·5
30·5	M	E	.....	16	26	12·15	+0·36	.....	−21	42	1·7	−0·4
Dec. 1·5	CS	E	.....	16	30	31·00	+0·15	.....	−21	51	28·4	−1·3
3·5	RM	E	.....	16	39	10·93	+0·17	.....	−22	9	2·2	+0·5
15·5	CS	E	.....	17	32		.....	.....	−23	17	31·5	+1·6
16·5	M	E	.....	17	36	17·50	+0·26	.....	−23	20	12·4	+5·4
17·5	RM	E	.....	17	41		.....	.....	−23	22	32·7	+1·9
22·5	CS	E	.....	18	2	55·40	+0·12	.....	−23	26	57·3	−1·8
27·5	M	W	.....	18	25	8·13	+0·06	.....	−23	19	27·7	+1·1
1933												
Jan. 3·5	RM	W	.....	18	56	6·09	−0·01	.....	−22	49	26·6	−1·3
5·5	M	W	.....	19	5		.....	.....	−22	36	40·5	+2·4
12·5	M	W	.....	19	35	24·99	+0·07	.....	−21	38	17·9	+4·5
13·5	RM	W	.....	19	39	44·38	+0·16	.....	−21	28	19·0	+0·7
14·5	HS	W	.....	19	44	2·97	+0·10	.....	−21	17	52·0	+0·3
16·5	M	W	.....	19	52	38·30	+0·07	.....	−20	55	43·8	+0·1
18·5	HS	W	.....	20	1	10·92	+0·05	.....	−20	31	54·8	+4·8
20·5	RM	W	.....	20	9	40·83	+0·13	.....	−20	6	38·5	+3·5
23·5	M	W	.....	20	22	19·84	−0·04	.....	−19	25	55·2	+0·8
24·5	RM	W	.....	20	26	31·59	+0·18	.....	−19	11	33·8	+3·1
25·5	CS	W	.....	20	30	42·28	+0·13	.....	−18	56	55·4	+1·3
27·5	RM	W	.....	20	39	1·27	+0·07	.....	−18	26	34·9	−0·5
28·5	CS	W	.....	20	43	9·61	+0·11	.....	−18	10	53·0	−0·1
30·5	M	W	.....	20	51	23·70	+0·10	.....	−17	38	30·8	+1·0
Feb. 6·5	CS	W	.....	21	19	46·69	+0·11	.....	−15	35	47·8	+2·0
10·5	RM	W	.....	21	36		.....	.....	−14	19	44·5	+0·7
13·5	CS	W	E	21	47	29·61	−0·09	.....	−13	20		.....
15·5	M	E	.....	21	55	18·23	+0·18	.....	−12	39	21·1	+0·4
17·5	M	E	.....	22	3	3·76	+0·21	.....	−11	57	42·4	+0·5
18·5	M	E	.....	22	6	55·24	−0·04	.....	−11	36	35·7	+0·4
27·5	CS	E	.....	22	41	12·09	+0·00	.....	− 8	19	9·4	−1·1
28·5	M	E	.....	22	45		.....	.....	− 7	56	29·9	+0·0
March 11·5	M	E	.....	23	25	47·40	−0·02	.....	− 3	41	26·6	+1·2
13·5	M	E	.....	23	33	7·87	+0·02	.....	− 2	54	16·8	+0·5
16·5	M	W	.....	23	44	6·30	−0·23	.....	− 1	43	16·7	+1·1

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	17·5	HS	W	.....	23	47	45·38	−0·29	.....	− 1	19	35·0	+0·6
	18·5	M	W	.....	23	51		.....	.....	− 0	55	49·8	+3·1
	23·5	M	W	.....	0	9	37·54	+0·03	.....	+ 1	2	36·5	+0·3
	25·5	RM	W	.....	0	16	54·41	+0·30	.....	+ 1	49	52·7	+2·0
	29·5	M	W	.....	0	31	27·19	+0·07	.....	+ 3	23	47·0	+0·2
	30·5	M	W	.....	0	35	5·40	−0·03	.....	+ 3	47	9·1	+2·3
April	3·5	M	W	.....	0	49	39·46	+0·04	.....	+ 5	19	40·7	+0·6
	5·5	CS	W	.....	0	56	57·20	+0·06	.....	+ 6	5	24·5	+0·8
	6·5	M	W	.....	1	0	36·24	+0·00	.....	+ 6	28	7·4	+1·3
	13·5	M	E	.....	1	26	16·40	+0·02	.....	+ 9	3	36·3	−0·1
	15·5	CS	E	W	1	33	39·22	+0·11	.....	+ 9	46	47·2	+0·5
	19·5	CS	E	.....	1	48	29·23	+0·06	.....	+11	11	9·4	−0·4
	20·5	M	E	W	1	52	19·90	+0·18	.....	+11	31	50·2	+1·1
	21·5	RM	E	.....	1	55	56·70	−0·02	.....	+11	52	18·7	+1·4
	22·5	CS	E	.....	1	59	41·24	+0·08	.....	+12	12	33·0	+0·7
	24·5	M	E	.....	2	7	11·49	+0·06	.....	+12	52	30·8	+0·7
	29·5	CS	W	E	2	26	5·59	+0·06	S	+14	28	33·1	+0·3
May	4·5	CS	W	E	2	45	12·36	−0·04	S	+15	58	35·7	−0·5
	5·5	RM	W	.....	2	49	3·39	+0·02	.....	+16	15	49·7	+0·6
	6·5	M	W	.....	2	52	54·70	−0·18	.....	+16	33		.....
	8·5	HS	W	.....	3	0	39·55	−0·01	.....	+17	5	56·7	+2·8
	9·5	RM	W	.....	3	4	32·90	+0·16	.....	+17	22	0·8	−0·5
	11·5	CS	W	.....	3	12	20·89	+0·05	.....	+17	53	24·2	+0·2
	16·5	RM	W	.....	3	32	1·54	+0·21	.....	+19	6	32·4	+0·1
	17·5	M	W	.....	3	35	59·20	+0·00	.....	+19	20	14·0	+0·7
	18·5	CS	W	.....	3	40		.....	.....	+19	33	36·1	+1·3
	22·5	CS	W	.....	3	55	57·09	−0·03	.....	+20	23	38·0	−0·3
	26·5	RM	W	.....	4	12	5·00	−0·13	.....	+21	8	7·2	+0·2
June	1·5	RM	W	E	4	36	31·07	−0·13	.....	+22	3	49·8	+0·8
	5·5	M	W	.....	4	52	56·42	+0·03	.....	+22	33	18·1	+0·3
	6·5	CS	E	.....	4	57	3·54	+0·01	.....	+22	39	42·3	+1·1
	7·5	RM	E	W	5	1	11·11	+0·16	.....	+22	45	43·4	+2·5
	8·5	M	E	.....	5	5	18·85	+0·18	.....	+22	51	17·9	+1·3
	9·5	CS	E	.....	5	9	26·76	+0·09	.....	+22	56		.....
	10·5	RM	E	.....	5	13	35·06	+0·14	.....	+23	1	17·5	+1·6
	12·5	M	E	.....	5	21	52·06	−0·08	.....	+23	9	39·4	+1·2
	16·5	CS	E	W	5	38	29·09	+0·23	.....	+23	21	29·1	+0·3
	19·5	M	W	.....	5	50	57·61	−0·04	.....	+23	26		.....
	21·5	RM	W	.....	5	59	17·13	+0·08	.....	+23	27	0·7	+0·1
	22·5	M	W	.....	6	3	26·80	+0·04	.....	+23	26	51·7	−0·7
	23·5	RM	W	.....	6	8		.....	.....	+23	26	16·7	−2·6
	24·5	RM	W	.....	6	11	46·11	+0·15	.....	+23	25	19·3	−2·2
	26·5	M	W	.....	6	20		.....	.....	+23	22	10·9	−0·5
	27·5	RM	W	.....	6	24	14·05	+0·11	.....	+23	19	58·9	−0·6
	28·5	RM	W	.....	6	28	22·79	−0·14	.....	+23	17	22·4	−0·4

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	29·5	M	W	.....	6	32	31·76	+0·02	.....	+23	14	22·3	+0·5
July	3·5	M	W	E	6	49	4·21	−0·17	.....	+22	58		.....
	4·5	HS	W	.....	6	53	11·82	+0·03	.....	+22	53	10·9	−0·9
	5·5	M	W	.....	6	57	19·02	+0·14	.....	+22	47	46·4	+0·7
	6·5	M	W	.....	7	1	28·57	−0·04	.....	+22	42		.....
	10·5	M	W	.....	7	17	48·88	+0·04	.....	+22	14	42·1	−0·8
	11·5	HS	W	W	7	21	53·83	+0·18	.....	+22	6	58·2	+1·5
	12·5	CS	W	.....	7	25	58·02	−0·01	.....	+21	58	47·6	−0·1
	14·5	HS	W	.....	7	34	5·50	+0·04	.....	+21	41	21·8	−0·0
	15·5	CS	W	.....	7	38	8·53	+0·06	.....	+21	32	4·1	−1·3
	18·5	HS	W	.....	7	50	14·53	−0·02	.....	+21	2	3·8	−0·7
	19·5	CS	W	.....	7	54		.....	.....	+20	51	22·3	+1·3
	21·5	RM	W	.....	8	2	16·01	+0·10	.....	+20	28	50·9	−0·0
	22·5	CS	W	.....	8	6		.....	.....	+20	17	4·8	+0·1
	25·5	RM	W	.....	8	18		.....	.....	+19	39	43·9	−0·8
	26·5	CS	W	.....	8	22	6·84	+0·05	.....	+19	26	38·8	+0·3
	27·5	M	W	.....	8	26		.....	.....	+19	13	12·6	−0·4
	28·5	RM	W	.....	8	29	58·90	−0·02	.....	+18	59	29·4	+0·7
	31·5	RM	W	.....	8	41	42·52	+0·08	.....	+18	16	24·0	−0·4
Aug.	4·5	HS	W	.....	8	57	11·88	+0·15	.....	+17	14	49·3	−1·0
	5·5	CS	W	.....	9	1	2·60	+0·08	.....	+16	58	44·7	+0·5
	8·5	HS	W	W	9	12	31·49	+0·17	N	+16	8	47·8	−0·8
	9·5	CS	W	.....	9	16		.....	.....	+15	51	39·2	+0·7
	10·5	HS	W	.....	9	20	7·81	+0·16	.....	+15	34	11·8	−1·1
	12·5	M	E	.....	9	27	41·80	+0·06	.....	+14	58	36·3	−0·7
	15·5	M	E	.....	9	38	59·02	+0·17	.....	+14	3	25·8	+0·2
	16·5	RM	E	.....	9	42	43·42	−0·08	.....	+13	44	32·8	−1·4
	17·5	M	E	.....	9	46	27·73	+0·09	.....	+13	25	39·3	−0·4
	18·5	RM	E	.....	9	50	.....	.....	.....	+13	6	12·0	−0·4
	19·5	M	E	.....	9	53	54·56	+0·13	.....	+12	46	43·8	+1·2
	21·5	RM	E	.....	10	1	19·43	+0·13	.....	+12	7	6·3	−0·5
	29·5	HS	E	.....	10	30	40·93	−0·04	.....	+ 9	21	29·1	−1·1
	30·5	HS	E	.....	10	34	19·53	+0·16	.....	+ 9	0	4·7	−0·4
1934													
Jan.	24·5	CS	W	.....	20	26		.....	.....	−19	14	59·9	+3·0
Feb.	2·5	RM	W	.....	21	3		.....	.....	−16	51	55·2	+1·1
	3·5	M	W	.....	21	6	42·20	+0·21	.....	−16	34		.....
	5·5	HS	W	.....	21	15		.....	.....	−15	58	38·3	+3·0
	7·5	M	W	.....	21	22	47·65	−0·01	.....	−15	22		.....
	13·5	RM	W	.....	21	47		.....	.....	−13	24	57·8	+4·6
	16·5	M	W	.....	21	58		.....	.....	−12	23	30·4	+5·9
	17·5	M	W	.....	22	2		.....	.....	−12	2	40·6	+2·8
	21·5	M	W	.....	22	17	31·35	+0·04	.....	−10	37	23·5	−1·0
	23·5	RM	W	.....	22	25		.....	.....	− 9	53	41·5	+0·6

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	27·5	RM	W	.....	22	40	17·15	+0·09	.....	− 8	24	37·4	+0·5
March	8·5	M	W	.....	23	14		.....	.....	− 4	57	38·7	+0·2
	9·5	M	W	.....	23	18		.....	.....	− 4	34	12·7	+1·1
	10·5	HS	W	.....	23	21	12·57	−0·02	.....	− 4	10	42·3	+3·0
	12·5	M	W	.....	23	28	34·05	−0·03	.....	− 3	23	39·0	−0·4
	14·5	HS	W	.....	23	35	54·48	+0·10	.....	− 2	36	20·9	+1·5
	15·5	M	W	.....	23	39	34·22	+0·06	.....	− 2	12	40·6	+0·9
	16·5	RM	W	.....	23	43	13·85	+0·17	.....	− 1	48	56·6	+2·9
	19·5	M	W	.....	23	54	11·13	+0·12	.....	− 0	37	49·2	+0·9
	20·5	RM	W	.....	23	57	49·87	+0·12	.....	− 0	14	5·5	+1·6
	22·5	M	W	.....	0	5	6·80	−0·01	.....	+ 0	33	18·0	+1·9
	23·5	RM	W	.....	0	9		.....	.....	+ 0	56	57·6	+1·7
	28·5	HS	W	.....	0	26	56·03	+0·04	.....	+ 2	54	43·2	+2·4
	31·5	HS	W	W	0	37	50·65	+0·11	.....	+ 4	4	42·2	+1·4
April	4·5	RM	E	.....	0	52	24·67	+0·08	.....	+ 5	36	57·3	+0·6
	5·5	M	E	.....	0	56	3·54	+0·05	.....	+ 6	0		.....
	7·5	RM	E	E	1	3	21·95	+0·04	.....	+ 6	45	10·5	+0·9
	9·5	M	E	.....	1	10	41·20	−0·06	.....	+ 7	30	6·9	+2·0
	10·5	HS	E	.....	1	14	21·39	+0·07	.....	+ 7	52	21·2	−0·3
	13·5	HS	E	.....	1	25	23·24	−0·03	.....	+ 8	58	23·2	+0·6
	17·5	HS	E	.....	1	40	10·52	+0·09	.....	+10	24	18·4	+1·6
	18·5	RM	E	.....	1	43	53·19	+0·07	.....	+10	45	21·5	+1·2
	20·5	M	E	.....	1	51	19·74	+0·09	.....	+11	26	56·6	+1·8
	24·5	HS	E	W	2	6	17·66	−0·01	.....	+12	47	44·6	−0·1
	28·5	RM	E	.....	2	21	22·96	−0·02	.....	+14	5	13·0	+1·2
	30·5	M	E	.....	2	28	58·59	−0·06	.....	+14	42	34·7	+1·1
May	1·5	RM	E	.....	2	32	47·13	−0·13	.....	+15	0	52·6	−0·1
	2·5	M	E	.....	2	37		.....	.....	+15	18	56·9	−0·2
	3·5	M	E	.....	2	40	26·23	+0·06	.....	+15	37		.....
	4·5	M	E	.....	2	44		.....	.....	+15	54	20·8	+0·1
	5·5	M	E	.....	2	48	7·29	−0·04	.....	+16	11	39·1	+0·0
	7·5	HS	E	.....	2	55	50·81	+0·00	.....	+16	45	26·4	−0·9
	8·5	RM	E	.....	2	59	43·41	−0·02	.....	+17	1	58·4	+1·6
	12·5	M	E	.....	3	15	19·74	−0·10	.....	+18	5	2·1	+0·6
	14·5	HS	E	.....	3	23		.....	.....	+18	34	45·5	−0·3
	15·5	RM	E	.....	3	27	8·15	−0·07	.....	+18	49	10·0	+0·2
	16·5	M	E	.....	3	31	5·43	−0·05	.....	+19	3	15·3	+0·6
	18·5	M	E	.....	3	39		.....	.....	+19	30	27·6	+1·5
	19·5	M	E	.....	3	43	0·60	+0·01	.....	+19	43	34·2	+2·1
	25·5	M	E	.....	4	7	5·06	+0·00	.....	+20	54	54·5	−0·8
	26·5	M	E	.....	4	11	7·60	+0·05	.....	+21	5	35·7	+0·7
	28·5	HS	E	.....	4	19	14·03	+0·07	.....	+21	25	47·2	−1·6
	30·5	M	E	.....	4	27	22·24	+0·02	.....	+21	44	34·4	+0·7
June	1·5	M	E	.....	4	35	32·34	+0·08	.....	+22	1	49·8	+1·5
	2·5	HS	E	.....	4	39	37·88	−0·05	.....	+22	9	52·1	+0·8

SUN—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
5·5	M	E	.....	4 51 57·19	−0·10	.....	+22 32	.....
6·5	HS	E	.....	4 56 4·51	+0·02	.....	+22 38 11·9	+1·7
7·5	M	E	W	5 0 11·94	−0·09	.....	+22 44 17·2	+1·4
8·5	CS	E	E	5 4 19·91	+0·05	.....	+22 50	.....
18·5	CS	E	.....	5 46	.....	.....	+23 24 34·5	+0·9
20·5	HS	E	.....	5 54 9·24	+0·00	.....	+23 26 33·4	+0·6
21·5	HS	E	E	5 58 18·89	+0·05	.....	+23 27	.....
22·5	M	E	.....	6 2 28·34	−0·08	.....	+23 26 53·5	+0·7
23·5	HS	E	.....	6 6 37·91	−0·02	.....	+23 26 25·8	+0·1
25·5	M	E	.....	6 14 56·75	+0·08	.....	+23 24 16·7	−0·4
27·5	HS	E	.....	6 23 14·94	+0·01	.....	+23 20 30·1	+0·1
30·5	HS	E	.....	6 36	.....	.....	+23 11 45·6	+0·5
July 3·5	M	E	.....	6 48	.....	.....	+22 59 20·9	+0·0
9·5	HS	E	.....	7 13	.....	.....	+22 23 47·4	+2·5
10·5	M	E	.....	7 17	.....	.....	+22 16 28·3	+1·7
13·5	M	E	.....	7 29	.....	.....	+21 52 15·1	+1·1
14·5	HS	E	.....	7 33 9·05	+0·01	.....	+21 43 24·9	+0·2
16·5	HS	E	W	7 41 15·03	+0·12	.....	+21 24 39·1	−0·2
17·5	M	E	.....	7 45	.....	.....	+21 14 45·2	+1·4
19·5	HS	E	.....	7 53 19·71	−0·02	.....	+20 53 48·3	−0·3
20·5	CS	E	.....	7 57	.....	.....	+20 42 49·9	+0·6
21·5	HS	E	.....	8 1 20·22	+0·09	.....	+20 31 29·2	+0·2
25·5	HS	E	W	8 17 14·04	+0·14	.....	+19 43	.....
27·5	HS	E	.....	8 25 7·26	+0·04	.....	+19 16 23·9	+0·0
28·5	HS	E	.....	8 29 3·12	+0·12	.....	+19 2 44·6	−0·1
Aug. 1·5	HS	E	.....	8 44 40·21	+0·01	.....	+18 5 1·6	+0·2
3·5	HS	E	.....	8 52 25·17	−0·11	.....	+17 34 21·0	−0·6
7·5	HS	E	.....	9 7 48·46	+0·11	.....	+16 29 37·2	−0·6
10·5	M	E	E	9 19 14·44	−0·07	.....	+15 38	.....
11·5	HS	E	.....	9 23 2·11	+0·04	.....	+15 20 38·2	+0·1
13·5	HS	E	.....	9 31	.....	.....	+14 44 38·8	−0·1
15·5	M	E	.....	9 38 6·59	−0·05	.....	+14 7 45·7	+2·4
17·5	RM	E	.....	9 45 35·57	−0·04	.....	+13 29 57·2	+3·0
18·5	M	E	.....	9 49 19·28	+0·00	.....	+13 11	.....
20·5	HS	E	.....	9 56 45·10	+0·00	.....	+12 31 35·5	−0·7
21·5	RM	E	.....	10 0 27·19	−0·05	.....	+12 11 47·2	+1·2
22·5	M	E	W	10 4 8·98	+0·06	.....	+11 51 44·6	+0·1
23·5	HS	E	.....	10 7 50·23	+0·10	.....	+11 31 32·0	+0·1
25·5	M	E	W	10 15 11·25	+0·02	N	+10 50 33·4	−0·5
27·5	HS	E	.....	10 22 30·74	+0·05	.....	+10 8 54·5	−0·2
29·5	M	E	.....	10 29 48·77	+0·08	.....	+ 9 26 35·6	−0·9
30·5	HS	E	W	10 33 27·12	−0·05	.....	+ 9 5 13·5	+0·0
31·5	RM	E	.....	10 37 5·44	+0·10	.....	+ 8 43 42·0	+0·4
Sept. 1·5	M	E	.....	10 40 43·21	+0·02	.....	+ 8 22 2·5	+1·3
11·5	RM	E	E	11 16 48·78	+0·09	.....	+ 4 38 44·1	+0·6

SUN—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	12·5	RM	E	W	11	20	24·28	+0·00	.....	+ 4	15	51·7	−0·3
	19·5	RM	E	.....	11	45	31·36	+0·09	.....	+ 1	34	8·6	+1·1
	21·5	HS	E	.....	11	52	41·74	+0·02	.....	+ 0	47		.....
	26·5	RM	E	.....	12	10	39·75	+0·15	.....	− 1	09	20·1	−1·5
	28·5	HS	E	.....	12	17	51·93	−0·01	.....	− 1	56		.....
Oct.	1·5	M	E	.....	12	28	42·29	−0·01	.....	− 3	6	5·7	−0·4
	4·5	M	E	.....	12	39	35·49	+0·13	.....	− 4	15	50·9	−1·1
	9·5	RM	E	.....	12	57	51·19	+0·02	.....	− 6	10	58·0	+1·3
	12·5	RM	E	.....	13	9		.....	.....	− 7	19	7·4	+1·7
	13·5	HS	E	.....	13	13		.....	.....	− 7	41	41·4	−0·7
	16·5	RM	E	.....	13	24		.....	.....	− 8	48	35·3	−0·2
	17·5	HS	E	.....	13	27	28·33	+0·10	.....	− 9	10	40·8	−2·4
	24·5	HS	E	.....	13	54		.....	.....	−11	40	57·1	+1·0
	25·5	M	E	W	13	57	42·26	+0·06	.....	−12	1	47·6	−0·1
Nov.	2·5	RM	E	.....	14	29		.....	.....	−14	41	16·5	−1·7
	3·5	M	E	.....	14	32	38·63	+0·16	.....	−15	0	10·5	+0·5
	6·5	RM	E	.....	14	44	31·86	+0·02	.....	−15	55	30·8	−0·5
	12·5	RM	E	.....	15	9		.....	.....	−17	38	44·9	+3·1
Dec.	8·5	M	W	.....	16	58	53·04	+0·18	.....	−22	42	16·7	+3·2
	10·5	M	W	E	17	7	39·91	+0·09	.....	−23	54	9·2	+4·2
	12·5	RM	W	.....	17	16	28·54	+0·16	.....	−23	4	17·5	+0·7
	17·5	HS	W	.....	17	39		.....	.....	−23	21	24·1	+3·0
	18·5	M	W	.....	17	43	1·37	+0·21	.....	−23	23	29·5	−0·4
	20·5	HS	W	.....	17	51	53·64	+0·00	.....	−23	26	6·7	+2·2
	22·5	RM	W	.....	18	0	46·43	−0·07	.....	−23	26	55·4	+0·4
	31·5	M	W	.....	18	41		.....	.....	−23	7	6·1	+3·4
1935													
Jan.	11·5	RM	W	.....	19	28	59·29	−0·00	.....	−21	52	23·9	+1·0
	12·5	M	W	.....	19	33	19·65	+0·09	.....	−21	42	54·9	+4·5
	14·5	HS	W	.....	19	41	58·45	+0·22	.....	−21	22	53·5	−0·6
	15·5	RM	W	W	19	46	16·62	+0·06	.....	−21	12	11·3	+1·5
	16·5	M	W	.....	19	50	34·36	+0·13	.....	−21	1	5·1	+3·1
	18·5	RM	W	E	19	59	7·43	+0·01	.....	−20	37	41·7	+5·3
	19·5	M	W	.....	20	3	23·16	+0·21	.....	−20	25	27·5	+3·7
	22·5	RM	W	.....	20	16		.....	.....	−19	46	22·4	+4·2
	29·5	RM	W	.....	20	45	16·60	+0·16	.....	−18	2	40·9	−1·5
Feb.	4·5	M	W	.....	21	9	46·88	+0·43	.....	−16	20	55·7	+1·7
	5·5	RM	W	.....	21	13	48·94	+0·35	.....	−16	2	55·8	+2·7
	6·5	HS	W	.....	21	17	50·10	+0·19	.....	−15	44	40·5	+2·5
	7·5	M	W	.....	21	21	50·47	+0·07	.....	−15	26	9·7	+1·9
	11·5	M	E	.....	21	37	44·09	−0·12	.....	−14	9	32·0	+2·0
	12·5	M	E	.....	21	41	40·76	+0·11	.....	−13	49	49·1	−0·4
	16·5	HS	E	.....	21	57	18·87	+0·10	.....	−12	28	35·0	+1·0
	20·5	M	E	.....	22	12	45·34	+0·03	.....	−11	4		.....
	22·5	M	E	.....	22	20	24·54	−0·01	.....	−10	21		
	26·5	M	E	.....	22	36	35·73	+0·05	.....	− 8	52	31·9	+0·9
	28·5	M	E	.....	22	43	7·82	−0·05	.....	− 8	7		.....

SUN—*Concluded*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
March 7·5	M	E	.....	23 9 15·15	+0·20	.....	− 5 26 29·2	+1·7
8·5	RM	E	.....	23 12 57·18	+0·14	.....	− 5 3 8·2	+2·2
9·5	RM	E	.....	23 16 38·88	+0·15	.....	− 4 39 45·1	+1·0
13·5	RM	E	.....	23 31 21·93	+0·04	.....	− 3 5 36·7	+1·8
14·5	M	E	.....	23 35 1·88	+0·00	.....	− 2 41 58·1	+2·6
18·5	M	E	.....	23 49 39·33	+0·06	.....	− 1 7 15·9	+1·3
20·5	RM	E	.....	23 56 56·86	+0·11	.....	− 0 19 51·6	+1·2
22·5	M	E	W	0 4 13·18	−0·48	.....	+ 0 27 32·9	+3·0
25·5	M	E	.....	0 15 8·43	+0·02	.....	+ 1 38 26·5	+2·3
26·5	RM	E	.....	0 18 46·77	+0·19	.....	+ 2 1 59·0	+0·6
27·5	RM	E	.....	0 22 24·82	+0·06	.....	+ 2 25 30·2	+0·0
30·5	M	E	.....	0 33	.....	.....	+ 3 35 45·3	−1·4
April 3·5	M	E	.....	0 47 53·60	+0·04	.....	+ 5 8 32·3	+0·9
4·5	HS	E	.....	0 51 32·50	+0·11	.....	+ 5 31 30·5	+0·7
5·5	RM	E	.....	0 55 11·47	+0·10	.....	+ 5 54 23·3	+1·0
6·5	RM	E	.....	0 58 50·62	+0·09	.....	+ 6 17 10·2	+1·6

MERCURY

Date	Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
				h	m	s	s		°	′	″	″
1924 Sept. 3	RM	E	W	11	1	32·46	−0·04	C	+ 6	47	33·0	+0·1
25	M	E	W	11	7	54·09	−0·10	C	+ 6	36	54·2	+0·2
26	CS	E	.....	11	12		.....	S	+ 6	24	56·6	−0·6
Oct. 8	M	E	W	12	18	37·84	+0·02	S	+ 0	3	25·9	+0·4
12	M	E	W	12	48	54·03	+0·04	C	− 2	51	28·7	−0·9
1925 Feb. 17	RM	E	E	21	17	29·70	−0·14	N	−17	53	5·8	−1·2
May 27	CS	W	E	2	46	16·81	+0·18	N	+13	11	29·7	+0·2
June 8	HS	E	E	4	8	20·12	−0·17	C	+20	2	19·9	+0·6
July 14	CS	W	W	9	10	55·09	+0·09	C	+17	21	47·0	−0·7
16	CS	W	W	9	22	16·99	−0·01	N	+16	14	1·2	−1·0
Sept. 17	RM	W	E	10	43	9·32	−0·04	C	+ 9	44	23·4	−0·4
19	HS	W	E	10	55	48·06	−0·02	C	+ 8	39	35·0	+0·1
26	CS	W	E	11	42	21·96	+0·08	.....	+ 3	54		.....
1926 May 1	CS	E	E	0	55	31·98	+0·05	N	+ 2	45	59·9	+0·5
15	RM	W	E	2	8	40·44	+0·10	C	+10	26	2·4	+0·8
17	CS	W	E	2	21	25·85	+0·12	.....	+11	46		.....
25	CS	W	E	3	19	14·28	−0·01	.....	+17	16		.....
26	M	W	E	3	27	17·13	+0·03	N	+17	56	24·8	−1·3
June 22	CS	E	.....	7	27		.....	N	+23	53	32·1	+0·2
29	CS	E	W	8	13	29·06	+0·12	N	+21	19	14·9	−0·4
July 19	M	W	W	9	27	39·73	+0·13	C	+13	31	24·0	+1·4
1927 April 9	HS	E	E	23	30	26·68	−0·08	.....	− 5	17		.....
28	HS	E	E	1	3	56·73	+0·05	.....	+ 4	3		.....
30	CS	E	E	1	16	7·07	−0·30	.....	+ 5	26		.....
May 3	HS	W	E	1	35	17·24	+0·02	.....	+ 7	37		.....
June 1	RM	W	W	5	36	39·78	+0·27	C	+25	17	33·3	+0·5
15	RM	W	W	7	16	55·97	+0·09	C	+23	53	52·0	−1·1
24	RM	W	W	7	57	8·49	+0·01	C	+20	55	25·9	−1·2
Aug. 3	RM	E	E	7	35	43·08	−0·10	S	+18	50	1·2	+2·7
6	CS	W	E	7	43	35·94	−0·04	.....	+19	20		.....
9	CS	W	E	7	55	30·47	+0·06	.....	+19	37		.....
10	M	W	E	8	0	19·50	−0·09	S	+19	39	28·5	−3·3
Dec. 1	CS	E	E	15	9	26·79	−0·06	C	−15	36	12·7	−1·8
3	RM	E	E	15	19	47·96	+0·17	C	−16	29	40·5	+0·6
1928 April 16	M	W	E	0	38	17·66	+0·15	C	+ 1	38	59·0	+0·7
20	M	W	E	1	4	40·78	+0·13	N	+ 4	45	59·9	+0·7
July 30	CS	W	E	7	29	3·11	+0·08	S	+21	44	45·8	−0·7
Nov. 9	CS	W	E	13	47	35·53	+0·15	S	− 8	39	53·6	−2·2
23	CS	W	E	15	1	34·02	+0·19	S	−15	50	26·9	−0·9
1929 July 15	RM	E	E	6	26	53·54	+0·08	C	+22	47	52·2	+0·2
Oct. 28	M	E	E	13	7	57·53	+0·09	S	− 4	56	4·7	−3·7
1930 June 23	HS	E	E	4	36	42·84	+0·11	N	+19	48	48·9	−0·2
25	CS	E	E	4	49	8·85	+0·13	S	+20	34	47·5	−1·1
July 4	HS	E	E	5	57	50·56	+0·03	N	+23	23	11·0	+0·5
5	HS	E	.....	6	7		.....	N	+23	34	6·1	+0·5

MERCURY—*Concluded*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
Aug. 5	M	E	W	10 19 57·17	+0·13	C	+11 19 13·5	−0·7
1931 May 28	HS	W	E	2 41 8·35	+0·23	N	+12 0 57·5	+0·3
30	HS	W	E	2 49 15·44	+0·14	N	+12 45 20·0	+0·8
June 1	RM	W	E	2 58 11·61	+0·08	.....	+13 35	.....
2	M	W	E	3 2 58·03	+0·10	N	+14 0 46·6	−0·8
12	RM	E	E	4 2 13·48	+0·01	N	+18 56 53·5	−0·4
13	M	E	E	4 9 21·46	−0·03	N	+19 27 18·0	+0·1
16	M	E	E	4 32 8·16	−0·02	N	+20 55 15·8	−1·7
19	RM	E	E	4 56 56·54	+0·04	S	+22 14 38·4	−0·2
Sept. 19	M	E	E	10 39 24·98	+0·01	.....	+ 9 0	.....
23	M	E	E	10 56 16·74	−0·02	C	+ 8 8 51·0	+0·0
28	RM	E	E	11 24 21·24	+0·02	C	+ 5 47 19·9	−0·8
30	M	E	E	11 36 46·06	−0·05	C	+ 4 38 17·2	−1·7
Oct. 2	M	E	E	11 49 29·98	−0·19	S	+ 3 12 36·4	+0·3
5	M	W	E	12 8 51·56	−0·03	C	+ 1 3 6·8	+0·9
6	HS	W	E	12 15 19·80	+0·21	S	+ 0 18 27·6	−1·2
9	M	W	E	12 34 39·24	+0·00	C	− 1 57 31·7	−1·2
Dec. 30	M	W	E	17 18 13·67	+0·08	S	−20 2 16·0	+1·8
1932 Feb. 16	M	E	E	21 27 55·47	+0·11	S	−17 9 41·0	+2·9
Mar. 12	CS	W	W	0 19 36·97	+0·21	C	+ 2 19 49·5	+0·3
May 13	RM	E	E	1 45 4·67	+0·15	C	+ 7 29 47·6	+1·0
25	M	E	E	2 51 16·69	−0·17	C	+14 8 40·2	−0·6
June 1	M	E	E	3 41 42·15	−0·01	S	+18 32 0·4	+1·8
2	M	E	E	3 49 42·11	−0·05	S	+19 8 26·6	+1·4
Sept. 8	M	W	E	10 6 10·38	−0·06	N	+12 46 58·4	−0·5
9	RM	W	E	10 12 13·01	+0·11	C	+12 23 45·0	+0·7
10	M	W	E	10 18 28·99	+0·07	C	+11 57 34·8	+0·0
12	RM	W	E	10 31 32·68	+0·09	C	+10 56 50·9	−0·5
13	CS	W	E	10 38 16·10	+0·05	C	+10 22 47·2	+0·0
Dec. 22	M	E	E	16 29 33·80	−0·06	S	−19 35 7·3	+1·6
27	RM	W	E	16 52 5·29	+0·09	C	−20 58 16·9	−1·0
1933 May 18	CS	W	C	2 53 41·00	+0·07	C	+15 21 13·7	+0·5
June 12	M	E	W	6 35 19·63	+0·28	C	+25 14 16·8	+0·2
23	RM	W	W	7 52 1·40	−0·20	S	+22 25 25·8	+1·2
29	M	W	W	8 22 34·44	+0·13	C	+20 1 6·1	+0·8
July 3	M	W	.....	8 38	.....	C	+18 19 27·5	−0·6
1934 April 5	M	E	.....	23 18	.....	C	− 6 46 14·7	−0·3
9	M	E	E	23 36 1·32	−0·14	C	− 5 10 49·2	+0·2
June 7	M	E	W	6 41 58·17	+0·12	C	+24 59 42·5	−0·5
Nov. 14	M	E	.....	14 8	.....	S	−10 32 0·1	+1·7
1935 April 6	M	E	E	23 50 48·77	−0·04	.....	− 3 38	.....

VENUS

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
1924 Aug. 20	CS	W	E	6 59 12·89	+0·03	.....	+18 25	.....
Sept. 23	RM	E	E	9 11 55·42	+0·13	C	+15 2 7·5	−0·5
25	M	E	E	9 20 31·70	−0·05	S	+14 33 54·7	+1·0
Oct. 29	RM	E	E	11 49 3·95	+0·17	C	+ 2 39 56·3	−0·4
1925 Jan. 17	CS	W	E	18 14 41·38	+0·04	.....	−19 9	.....
23	M	W	C	18 47 15·85	+0·16	C	−22 49 55·8	+0·2
Feb. 17	RM	E	E	20 59 18·26	−0·21	N	−17 58 38·3	−0·1
18	M	E	E	21 4 22·50	−0·24	C	−17 39 15·8	+1·8
Mar. 9	HS	W	C	22 37 10·15	+0·06	C	−10 9 47·7	+2·3
11	HS	W	C	22 46 34·88	+0·04	C	− 9 15 19·4	+1·8
12	RM	W	E	22 51 15·74	−0·24	C	− 8 47 44·6	−0·3
May 27	CS	W	E	4 54 1·24	−0·14	C	+22 52 7·5	+0·0
July 16	CS	W	W	9 16 6·00	+0·01	C	+17 31 47·1	−1·7
27	M	W	W	10 8 31·59	+0·09	N	+13 5 57·7	−1·1
Aug. 7	CS	E	W	10 58 42·54	+0·06	.....	+ 7 59	.....
11	HS	E	C	11 16 31·42	+0·01	C	+ 6 0 57·0	+0·8
24	CS	E	.....	12 13	.....	N	− 0 37 47·7	+0·1
25	HS	E	W	12 17 49·64	+0·08	C	− 1 8 49·6	+1·7
26	CS	E	W	12 22 10·30	−0·05	N	− 1 39 53·8	+0·5
31	CS	E	W	12 43 54·32	+0·02	N	− 4 14 42·0	+0·3
Sept. 17	HS	W	W	13 58 44·98	+0·13	C	−12 38 58·9	−1·2
25	HS	W	W	14 35 3·78	+0·17	C	−16 12 52·9	+0·0
Oct. 1	RM	W	.....	15 3	.....	C	−18 38 17·7	−0·3
22	M	E	.....	16 45	.....	S	−24 47 56·8	+2·0
Dec. 9	CS	E	W	20 27 32·16	+0·10	.....	−21 36	.....
15	M	E	W	20 48 59·91	+0·07	S	−19 47 45·5	+1·3
23	M	E	W	21 13 40·30	+0·09	.....	−17 11	.....
28	HS	E	W	21 26 21·55	+0·11	C	−15 29 5·1	+1·9
29	CS	E	W	21 28 36·41	−0·03	S	−15 8 50·4	−0·1
1926 Jan. 7	CS	E	W	21 43 53·71	−0·27	S	−12 12 27·6	−2·0
Mar. 9	M	W	E	20 51 11·04	−0·17	S	−11 30 53·0	+3·1
13	M	W	E	20 58 10·32	−0·01	N	−11 41 38·5	−1·2
18	RM	W	E	21 9 15·00	−0·09	C	−11 42 59·7	+2·3
20	RM	W	E	21 14 18·30	+0·11	C	−11 39 45·9	+1·4
April 12	RM	E	E	22 28 54·31	+0·10	C	− 8 28 28·6	+1·9
20	RM	E	E	22 58 55·72	+0·04	C	− 6 22 51·2	+1·4
27	CS	E	E	23 26 1·56	−0·05	N	− 4 13 29·4	+0·4
May 1	CS	E	E	23 41 46·79	−0·02	N	− 2 52 46·0	+0·4
8	HS	W	E	0 9 44·85	−0·06	.....	− 0 22	.....
12	HS	W	E	0 25 56·44	+0·02	N	+ 1 8 16·0	−1·2
14	M	W	E	0 34 5·63	+0·10	.....	+ 1 54	.....
15	RM	W	E	0 38 10·96	+0·02	C	+ 2 17 28·4	+1·3
17	CS	W	E	0 46 23·59	+0·09	.....	+ 3 4	.....
25	CS	W	.....	1 20	.....	N	+ 6 12 41·9	+2·0
29	CS	W	E	1 36 34·57	+0·14	N	+ 7 47 1·7	+1·7

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
June 2	RM	W	E	1 53 42·78	−0·10	N	+ 9 20 23·2	−0·4
4	HS	E	E	2 2 22·53	+0·08	C	+10 6 30·5	−0·0
5	CS	E	E	2 6 43·73	+0·10	.....	+10 29	.....
16	RM	E	E	2 55 42·28	−0·13	C	+14 29 0·8	+1·8
17	M	E	E	3 0 16·07	+0·14	.....	+14 49	.....
22	CS	E	E	3 23 20·55	+0·07	N	+16 26 49·0	+1·2
24	M	E	E	3 32 42·35	−0·05	S	+17 3 24·6	−2·8
25	RM	E	E	3 37 25·24	+0·12	C	+17 21 12·5	−2·2
28	HS	E	E	3 51 40·41	−0·03	C	+18 12 20·0	+1·0
30	HS	E	E	4 1 16·54	−0·04	C	+18 44 21·2	+0·8
July 3	HS	W	E	4 15 49·56	+0·02	C	+19 29 7·3	+0·3
5	M	W	E	4 25 37·24	+0·04	.....	+19 57	.....
13	HS	W	E	5 5 29·74	−0·01	C	+21 26 42·9	−0·5
14	RM	W	E	5 10 33·04	−0·05	C	+21 35 34·2	+0·7
16	M	W	E	5 20 42·32	+0·04	.....	+21 52	.....
19	RM	W	E	5 36 1·75	+0·01	C	+22 11 6·8	+0·8
23	RM	W	E	5 56 36·62	−0·04	C	+22 28 47·8	+1·3
24	CS	W	E	6 1 46·80	+0·07	.....	+22 32	.....
26	M	W	E	6 12 8·15	−0·00	N	+22 35 31·2	−0·9
27	RM	W	E	6 17 19·33	−0·09	C	+22 36 32·4	+0·7
Aug. 5	RM	W	E	7 4 8·60	−0·00	C	+22 16 41·5	−0·3
1927 April 11	CS	E	W	3 25 37·27	+0·12	S	+19 37 19·8	−1·6
13	HS	E	.....	3 35	.....	C	+20 17 58·5	−0·3
14	M	E	W	3 40 20·24	+0·16	.....	+20 38	.....
16	CS	E	W	3 50 13·34	+0·07	S	+21 14 57·2	−0·5
20	CS	E	W	4 10 10·16	+0·08	S	+22 23 6·1	−1·2
27	M	E	W	4 45 33·57	+0·04	N	+23 59 19·9	+1·2
28	HS	E	W	4 50 39·52	+0·18	C	+24 10 31·8	+0·3
May 3	HS	W	W	5 16 14·41	−0·06	C	+24 56 41·1	+0·3
June 1	RM	W	.....	7 42	.....	C	+23 50 20·2	−0·7
13	M	W	W	8 36 23·32	+0·08	N	+20 52 36·3	−0·6
15	RM	W	W	8 45 1·92	+0·18	C	+20 16 18·7	+1·1
24	RM	W	W	9 22 2·54	+0·07	C	+17 13 50·5	−0·3
29	RM	W	W	9 41 13·04	+0·24	C	+15 21 28·8	+2·4
July 11	HS	E	W	10 22 45·04	−0·07	N	+10 31 22·6	−1·0
18	M	E	W	10 43 41·27	+0·06	.....	+ 7 37	.....
19	HS	E	W	10 46 27·16	−0·22	N	+ 7 11 42·8	−1·1
20	RM	E	W	10 49 9·94	+0·13	C	+ 6 46 54·8	+1·1
Aug. 2	CS	E	W	11 18 13·42	−0·14	N	+ 1 37 48·6	+0·5
5	M	W	W	11 23 0·49	+0·10	N	+ 0 32 59·2	+0·5
6	CS	W	W	11 24 24·33	−0·16	N	+ 0 12 12·8	+1·0
9	CS	W	W	11 27 59·51	−0·14	N	− 0 47 15·0	−0·2
12	RM	W	W	11 30 34·91	−0·07	.....	− 1 42	.....
24	M	W	W	11 29 29·35	−0·10	.....	− 4 8	.....
26	RM	W	W	11 27 24·49	−0·14	.....	− 4 18	.....

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
Sept. 16	HS	E	E	10 46 6·64	−0·21	N	− 1 18 9·8	+0·5
20	RM	E	E	10 39 28·48	−0·06	C	− 0 7 39·1	+1·0
24	RM	E	E	10 34 57·08	−0·16	C	+ 1 0 14·5	−0·7
Oct. 10	HS	W	.....	10 41	.....	S	+ 3 50 49·0	+0·8
13	RM	W	E	10 45 22·04	+0·04	C	+ 3 59 28·5	−4·3
14	HS	W	E	10 47 11·56	+0·12	S	+ 4 0 46·4	−1·0
Dec. 6	CS	E	E	13 45 20·19	+0·14	S	− 8 22 3·8	−2·4
1928 Jan. 5	CS	W	.....	16 1	.....	S	−18 13 3·3	−2·0
12	RM	W	E	16 35 36·68	−0·09	C	−19 51 20·0	−3·5
26	RM	W	E	17 47 15·01	+0·01	.....	−21 52	.....
31	M	W	E	18 13 23·00	−0·01	C	−22 7 1·3	+2·1
Feb. 2	HS	W	E	18 23 52·56	−0·07	C	−22 8 32·1	+3·5
13	M	W	E	19 21 38·17	+0·10	N	−21 30 59·6	−0·7
21	RM	W	E	20 3 13·50	−0·13	N	−20 15 24·0	−0·3
Mar. 1	RM	W	E	20 49 4·54	−0·15	C	−18 5 18·5	+1·8
6	RM	W	E	21 14 0·64	+0·16	C	−16 34 31·7	+1·6
8	CS	W	E	21 23 51·94	+0·06	N	−15 54 51·8	+0·7
10	RM	W	.....	21 34	.....	C	−15 13 25·8	+0·9
15	RM	W	E	21 57 50·70	−0·06	C	−13 22 30·9	+2·0
23	M	W	.....	22 36	.....	C	−10 6 28·2	+0·5
April 10	HS	W	E	23 58 18·35	−0·09	N	− 1 49 45·0	+2·4
11	CS	W	.....	0 3	.....	N	− 1 20 53·1	+2·6
16	M	W	E	0 25 25·28	+0·15	C	+ 1 3 58·3	−2·6
21	M	W	.....	0 48	.....	N	+ 3 28 57·2	+0·7
27	M	W	E	1 15 16·66	+0·16	N	+ 6 20 45·5	+0·7
May 7	RM	E	E	2 1 21·67	+0·07	C	+10 55 26·9	+0·4
8	M	E	E	2 6 2·19	+0·20	C	+11 21 44·8	−0·0
9	HS	E	C	2 10 43·37	+0·16	N	+11 47 44·5	−3·1
11	RM	E	E	2 20 8·35	+0·04	S	+12 39 6·5	+2·9
July 30	CS	W	W	9 12 48·24	+0·10	S	+17 32 6·0	−2·3
Aug. 20	CS	E	W	10 52 56·28	−0·01	S	+ 8 40 14·0	−1·2
22	CS	E	W	11 2 7·39	+0·03	C	+ 7 42 28·0	−0·7
Sept. 24	CS	W	W	13 31 11·63	−0·07	.....	− 8 59	.....
Oct. 6	CS	W	W	14 27 9·06	+0·01	N	−14 34 2·2	−2·3
8	CS	W	W	14 36 42·47	+0·18	N	−15 25 38·5	−2·3
13	CS	W	W	15 0 55·34	−0·12	N	−17 27 52·7	+0·0
Nov. 9	CS	W	W	17 19 55·62	−0·15	N	−24 40 21·9	+0·0
23	CS	W	W	18 35 14·51	+0·08	N	−25 10 37·4	+0·5
27	RM	W	W	18 56 37·73	+0·20	C	−24 52 25·9	+1·8
29	M	W	W	19 7 15·06	+0·13	C	−24 38 57·7	+1·2
Dec. 7	HS	W	W	19 49 5·61	−0·16	C	−23 16 47·8	+2·6
18	CS	W	W	20 44 21·39	−0·01	S	−20 16 25·7	−0·7
1929 Jan. 2	HS	W	W	21 54 23·24	+0·09	.....	−14 30	.....
4	RM	E	W	22 3 14·73	+0·23	C	−13 36 56·0	−1·9
7	M	E	W	22 16 19·33	+0·10	S	−12 15 11·6	+2·2

VENUS—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	8	RM	E	W	22	20	37·72	+0·15	C	−11	47	27·6	−1·0
Feb.	4	HS	E	W	0	7	17·49	+0·09	S	+ 1	37	30·7	+0·6
	12	M	W	W	0	35	26·40	−0·02	S	+ 5	35	18·8	+0·4
	13	RM	W	W	0	38	50·25	+0·02	C	+ 6	4	20·3	−1·4
	18	HS	W	W	0	55	21·61	−0·04	S	+ 8	26	29·5	−1·1
	20	RM	W	W	1	1	44·08	+0·04	C	+ 9	21	39·3	−0·8
	22	M	W	W	1	7	57·48	−0·06	S	+10	15	43·9	+2·3
	25	HS	W	W	1	16	59·35	−0·12	S	+11	34	23·3	−0·2
Mar.	22	HS	W	W	2	9	55·31	−0·13	S	+19	48	15·2	−0·7
	26	HS	W	W	2	12	34·74	−0·21	S	+20	27	13·5	−1·4
April	3	HS	W	W	2	10	55·96	−0·16	S	+20	53	5·7	+0·1
May	13	HS	E	E	1	18	40·01	+0·03	N	+ 9	28	43·6	+0·7
	17	M	E	E	1	22	4·29	+0·14	N	+ 8	58	47·6	−1·0
	20	HS	E	E	1	25	52·78	−0·04	N	+ 8	47	30·5	+0·1
	22	RM	E	E	1	28	57·62	+0·01	N	+ 8	44	52·8	−1·5
	25	RM	E	.....	1	34		.....	N	+ 8	47	48·1	−1·9
	29	RM	E	.....	1	43		.....	N	+ 9	3	10·3	−0·2
	30	HS	E	E	1	45	1·66	+0·03	.....	+ 9	9		.....
	31	M	E	.....	1	47		.....	N	+ 9	15	11·8	+0·9
June	4	HS	E	E	1	57	37·02	+0·03	N	+ 9	46	36·8	+0·2
	10	RM	W	E	2	14	46·89	+0·13	N	+10	48	43·5	+1·3
	17	RM	W	E	2	37	8·51	−0·05	N	+12	16	58·2	−0·6
	18	HS	W	E	2	40	31·23	+0·06	N	+12	30	33·8	+1·1
	21	HS	W	E	2	50	54·31	+0·18	N	+13	12	14·1	+1·4
	24	RM	W	E	3	1	38·66	−0·18	N	+13	54	54·4	+0·1
	26	M	W	E	3	9	0·29	+0·10	N	+14	23	39·5	−1·2
July	10	CS	E	E	4	4	22·46	+0·15	N	+17	39	7·8	+1·1
	11	M	E	E	4	8	33·94	+0·13	N	+17	51	56·6	−0·3
	12	RM	E	E	4	12	47·14	+0·09	N	+18	4	30·8	−2·5
	15	RM	E	E	4	25	37·03	−0·01	N	+18	40	51·7	+1·5
	16	RM	E	E	4	29	57·12	+0·08	N	+18	52	21·8	−0·6
	17	HS	E	E	4	34	18·77	+0·08	N	+19	3	37·9	+1·2
	19	RM	E	E	4	43	6·85	+0·07	N	+19	25	8·3	+0·2
	20	HS	E	E	4	47	33·29	+0·11	N	+19	35	24·9	+1·4
	24	HS	E	E	5	5	34·02	+0·15	N	+20	12	47·1	−0·1
Aug.	2	HS	E	E	5	47	24·58	+0·16	N	+21	12	31·9	+0·3
	6	M	E	E	6	6	29·30	+0·04	C	+21	26	46·5	+1·5
	8	HS	E	.....	6	16		.....	N	+21	30	45·3	−1·0
	15	HS	E	E	6	50	10·26	+0·07	C	+21	27	49·7	−0·3
	19	HS	E	E	7	9	48·40	+0·18	C	+21	13	53·6	−0·0
	20	M	E	E	7	14	43·56	+0·09	N	+21	8	57·0	−2·3
	21	RM	E	E	7	19	39·04	+0·13	S	+21	3	29·3	−1·3
	24	RM	E	E	7	34	26·11	+0·10	S	+20	43	39·9	+0·8
	30	M	E	E	8	3	59·71	+0·02	S	+19	48	35·3	+1·1
Sept.	12	RM	W	E	9	7	24·51	+0·04	S	+16	42	5·2	+0·2

VENUS—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	23	RM	W	E	9	59	52·12	+0·03	S	+13	0	47·4	−0·2
	24	HS	W	.....	10	5		.....	S	+12	38	10·9	−1·0
Oct.	1	HS	E	E	10	37	16·43	+0·02	S	+ 9	50	8·8	−2·5
	5	HS	W	E	10	55	46·11	+0·16	S	+ 8	7	23·4	−1·4
	7	RM	W	E	11	4	58·04	−0·01	S	+ 7	14	28·7	+0·7
	10	RM	W	E	11	18	43·58	+0·20	S	+ 5	53	22·1	+0·5
	15	M	E	E	11	41	33·23	−0·09	S	+ 3	34	26·9	+0·1
	19	M	E	E	11	59	46·57	+0·04	S	+ 1	40	46·6	+0·2
Nov.	5	CS	E	W	13	17	40·58	+0·08	S	− 6	29	11·1	−2·5
	22	HS	W	E	14	38	26·76	−0·00	S	−14	3	38·6	+0·4
	25	HS	W	E	14	53	11·82	+0·07	C	−15	15	21·9	−1·4
	29	HS	W	E	15	13	8·29	+0·20	N	−16	45	30·8	−0·9
Dec.	9	CS	W	.....	16	4		.....	S	−19	58	19·5	−0·5
1930 Mar.	15	HS	W	E	0	14	48·16	+0·15	N	+ 0	13	39·5	−2·0
	20	CS	W	W	0	37	28·97	+0·13	S	+ 2	47	8·0	+1·0
April	4	CS	E	W	1	46	10·53	−0·06	S	+10	13	20·1	−0·1
	9	CS	E	W	2	9	33·46	−0·03	.....	+12	32		.....
	14	CS	E	W	2	33	17·65	−0·02	S	+14	43	28·0	−3·1
	16	CS	E	W	2	42	54·10	+0·01	S	+15	33	33·8	−1·4
	28	CS	E	W	3	42	2·48	−0·12	S	+19	57	57·4	−1·8
May	9	M	W	W	4	38	29·92	+0·17	N	+20	16	49·8	−0·5
	12	M	W	W	4	54	12·41	+0·15	N	+23	28	32·5	−1·1
	23	M	W	W	5	52	31·15	+0·21	S	+24	44	6·4	+1·7
June	2	M	W	W	6	45	42·52	+0·20	N	+24	37	58·9	+0·5
	11	M	E	W	7	32	48·57	+0·02	C	+23	32	4·3	−0·1
	12	M	E	W	7	37	58·07	+0·13	C	+23	21	22·9	+0·5
	19	M	E	.....	8	13		.....	C	+21	48	44·1	−0·6
	23	HS	E	W	8	33	21·19	+0·11	N	+20	42	41·4	−0·0
	25	CS	E	W	8	42	6·84	+0·05	N	+20	6	21·3	+0·5
July	4	HS	E	W	9	25	55·23	+0·02	N	+16	58	14·1	+0·6
	10	RM	W	W	9	53	20·18	+0·19	N	+14	33	30·6	−1·0
	15	CS	W	W	10	15	31·87	+0·22	N	+12	23	23·3	+1·8
	17	RM	W	W	10	24	15·08	+0·09	N	+11	29	12·6	+0·4
Aug.	5	M	E	.....	11	43		.....	N	+ 2	14	48·5	−0·6
	11	CS	E	W	12	7	16·43	−0·16	N	− 0	47	40·1	+1·3
	21	CS	E	W	12	46	15·52	−0·00	N	− 5	50	2·6	−0·4
	25	CS	E	W	13	1	37·91	+0·08	N	− 7	48	30·2	+0·2
Sept.	3	RM	W	W	13	35	48·19	−0·03	N	−12	5	20·7	+0·7
	4	M	W	W	13	39	33·89	+0·12	N	−12	32	51·0	−1·4
	19	HS	W	W	14	34	42·04	+0·07	N	−18	49	47·9	−3·0
	22	M	W	W	14	45	19·78	+0·15	N	−19	55	49·0	−4·0
Oct.	3	RM	W	W	15	22	8·53	+0·07	N	−23	24	36·8	−1·7
	6	M	W	W	15	31	19·64	+0·12	N	−24	11	33·6	−3·1
	10	M	E	W	15	42	45·84	+0·07	N	−25	6	48·2	−3·8
	13	M	E	W	15	50	36·84	+0·01	N	−25	42	28·1	−3·9

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
14	CS	E	W	15 53 4·44	+0·10	N	−25 53 10·7	−1·7
21	CS	E	W	16 7 37·49	−0·06	N	−26 51 26·5	+0·6
22	M	E	.....	16 9	.....	N	−26 57 12·8	+0·1
29	M	E	W	16 17 0·70	−0·04	N	−27 17 19·1	−2·7
Dec. 4	RM	W	E	15 25 10·77	+0·02	N	−18 16 48·8	+1·8
15	M	W	E	15 21 40·45	+0·11	S	−15 49 6·1	+4·5
17	M	W	E	15 23 2·54	+0·04	S	−15 36 24·8	+0·9
22	M	W	E	15 28 51·08	−0·10	S	−15 22 26·5	+1·4
1931 Jan. 28	RM	E	E	17 21 45·96	+0·08	.....	−19 20	.....
Feb. 2	CS	E	E	17 42 50·46	+0·16	C	−19 50 14·0	+0·5
10	CS	E	.....	18 18	.....	S	−20 20 1·8	+0·4
23	M	E	E	19 18 32·47	−0·01	N	−20 5 42·9	−1·2
24	M	E	E	19 23 16·34	+0·05	N	−20 1 2·0	−1·0
28	CS	E	E	19 42 15·65	+0·21	S	−19 36 59·4	−0·8
Mar. 5	M	E	E	20 6 4·21	+0·02	.....	−18 55	.....
7	M	W	E	20 15 36·01	+0·01	N	−18 34 26·9	−1·6
23	HS	W	.....	21 31	.....	N	−14 38 16·2	+1·0
April 14	RM	E	E	23 11 29·64	+0·08	N	− 6 26 42·5	−0·8
16	RM	E	E	23 20 25·10	+0·01	N	− 5 35 24·2	−0·8
18	RM	E	E	23 29 19·33	+0·08	N	− 4 43 21·0	+0·0
20	M	E	E	23 38 12·30	+0·07	C	− 3 50 38·7	+1·0
21	RM	E	E	23 42 38·35	+0·01	N	− 3 24 7·7	−1·4
22	M	E	E	23 47 4·14	−0·09	N	− 2 57 27·4	−2·4
24	M	E	E	23 55 55·56	+0·08	N	− 2 3 41·6	+0·2
May 1	M	E	E	0 26 52·72	+0·07	N	+ 1 6 46·8	−2·1
4	M	E	E	0 40 9·58	−0·03	N	+ 2 29 0·0	−0·9
5	HS	E	E	0 44 35·68	+0·03	N	+ 2 56 25·6	+1·0
6	M	W	E	0 49 2·08	+0·13	N	+ 3 23 45·6	−1·6
9	HS	W	E	1 2 22·79	+0·08	N	+ 4 45 43·5	+2·5
12	HS	W	E	1 15 47·10	+0·13	N	+ 6 7 1·9	+2·5
13	M	W	E	1 20 15·96	−0·03	N	+ 6 33 52·9	−1·7
15	M	W	E	1 29 15·57	−0·04	N	+ 7 27 22·0	−2·1
18	M	W	E	1 42 49·47	+0·06	C	+ 8 46 35·7	−0·4
19	HS	W	E	1 47 22·10	+0·12	N	+ 9 12 43·0	+2·3
20	M	W	E	1 51 55·21	−0·02	N	+ 9 38 32·6	−1·6
21	HS	W	E	1 56 29·28	+0·08	.....	+10 4	.....
22	M	W	E	2 1 4·08	+0·15	N	+10 29 46·3	+0·5
26	HS	W	E	2 19 31·07	+0·17	N	+12 9 30·6	+1·2
28	HS	W	E	2 28 49·79	+0·18	N	+12 57 51·6	+2·2
30	HS	W	.....	2 38	.....	N	+13 45 3·0	+2·0
June 1	RM	W	E	2 47 38·58	+0·03	.....	+14 31	.....
2	M	W	E	2 52 23·36	+0·05	N	+14 53 27·8	−0·8
4	M	E	E	3 1 56·02	+0·01	N	+15 37 25·0	−0·3
11	M	E	E	3 35 54·99	−0·07	C	+17 59 6·7	+0·8
13	M	E	E	3 45 47·66	−0·09	C	+18 35 45·0	+1·6

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
16	M	E	E	4 0 45·12	−0·01	C	+19 27 7·9	+1·6
19	RM	E	E	4 15 52·44	+0·13	N	+20 13 57·1	−0·3
20	M	E	E	4 20 56·86	+0·05	N	+20 28 28·7	−2·2
24	RM	W	E	4 41 24·86	+0·03	N	+21 21 13·2	+0·0
27	M	W	E	4 56 55·67	−0·05	C	+21 54 41·0	+0·4
29	RM	W	.....	5 7	.....	N	+22 13 57·8	+0·2
30	CS	W	.....	5 13	.....	S	+22 22 40·3	−0·1
July 8	RM	W	E	5 54 45·99	−0·05	S	+23 9 16·4	+1·1
17	RM	W	E	6 42 40·73	+0·12	S	+23 10 25·1	−1·7
24	M	W	E	7 19 50·74	−0·05	N	+22 33 12·8	−1·5
Aug. 4	RM	E	E	8 17 21·14	+0·15	S	+20 29 54·9	+0·7
5	RM	E	E	8 22 29·70	−0·18	N	+20 14 57·0	−1·9
8	HS	W	E	8 37 51·02	+0·07	N	+19 26 46·2	+2·2
Nov. 19	M	E	.....	16 55	.....	C	−23 15 29·7	−0·9
Dec. 30	M	W	.....	20 36	.....	S	−20 24 39·4	+1·2
1932 Jan. 22	M	W	W	22 28 2·15	+0·12	S	−11 14 23·3	+2·9
25	M	W	W	22 41 48·11	+0·04	S	− 9 48 5·3	+2·8
Feb. 1	CS	W	W	23 13 19·93	−0·01	S	− 6 18 47·3	−2·5
15	CS	E	.....	0 15	.....	S	+ 0 58 55·0	−1·1
18	RM	E	W	0 27 31·99	−0·01	S	+ 2 33 27·7	+0·6
23	RM	E	W	0 49 1·43	+0·01	S	+ 5 9 46·9	+1·1
Mar. 3	RM	W	W	1 27 41·89	+0·22	S	+ 9 43 18·3	+2·1
12	CS	W	W	2 6 38·26	−0·02	S	+13 59 38·3	−1·0
15	M	W	W	2 19 43·05	+0·15	S	+15 19 54·4	+2·2
17	M	W	W	2 28 27·87	+0·16	S	+16 11 39·6	+1·8
18	RM	W	W	2 32 50·64	+0·02	S	+16 36 54·7	−3·2
23	M	W	W	2 54 50·36	+0·24	S	+18 37 47·1	+2·1
29	M	W	W	3 21 23·00	+0·08	S	+20 48 33·8	+2·1
April 4	RM	W	W	3 48 1·39	−0·01	S	+22 42 8·1	+0·4
14	CS	W	W	4 32 10·15	−0·02	S	+25 9 8·7	−1·2
20	RM	W	W	4 58 3·74	+0·09	S	26 10 26·8	+1·4
22	RM	W	W	5 6 30·96	+0·03	S	26 26 18·4	+1·7
May 9	M	E	W	6 12 11·35	+0·08	S	27 13 6·2	+3·2
16	M	E	W	6 34 10·47	+0·06	S	26 51 44·9	+3·1
17	HS	E	W	6 36 58·15	−0·16	N	26 47 4·5	+1·2
18	RM	E	W	6 39 40·45	−0·01	C	26 42 4·2	+0·8
19	M	E	W	6 42 16·72	+0·11	N	26 36 40·9	−1·5
23	HS	E	.....	6 52	.....	C	26 12 7·6	+0·5
June 1	RM	E	W	7 5 20·74	−0·09	N	25 1 24·7	−0·9
2	M	E	W	7 6 9·48	+0·01	N	24 52 29·5	−1·8
6	M	E	W	7 7 47·52	−0·06	N	24 15 12·4	−0·8
15	CS	W	W	7 1 27·65	−0·07	.....	22 43	.....
17	RM	W	W	6 58 11·46	−0·12	.....	22 21	.....
18	CS	W	W	6 56 19·80	−0·02	.....	22 10	.....
20	M	W	W	6 52 11·63	+0·07	.....	21 48	.....

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
July 8	CS	E	E	6 7 38·05	+0·07	N	18 38 4·4	+0·1
16	M	E	E	5 56 54·89	−0·12	N	17 52 22·4	−1·8
20	M	E	.....	5 55	.....	N	17 42 38·9	−1·0
28	RM	E	E	6 0 5·67	−0·26	.....	17 44	.....
Aug. 15	M	E	E	6 38 49·39	−0·11	N	18 28 49·2	−1·0
16	M	E	E	6 41 49·38	−0·10	N	18 30 42·4	−2·1
20	M	W	E	6 54 29·89	−0·05	N	18 36 4·5	−2·1
22	M	W	E	7 1 12·37	−0·09	S	18 37 14·1	+2·2
23	M	W	E	7 4 38·75	−0·04	.....	18 37	.....
25	RM	W	E	7 11 41·06	+0·11	C	18 36 28·8	+0·0
29	HS	W	E	7 26 19·78	+0·12	C	18 30 34·2	−0·9
Sept. 8	M	W	E	8 5 34·18	−0·10	S	17 47 21·5	+1·0
9	RM	W	E	8 9 39·65	+0·24	S	17 40 32·1	−2·9
10	M	W	E	8 13 46·05	+0·04	S	17 33 23·2	+1·4
12	RM	W	E	8 22 3·33	+0·16	S	17 17 30·9	−0·5
15	M	W	.....	8 35	.....	N	16 50 11·4	−1·7
16	RM	W	E	8 38 51·62	+0·04	S	16 40 10·8	+0·8
17	M	W	E	8 43 6·20	−0·02	S	16 29 39·0	+0·7
20	RM	W	E	8 55 55·18	−0·02	S	15 55 11·9	+0·2
24	M	W	E	9 13 10·23	+0·02	S	15 2 40·1	+0·1
29	M	W	.....	9 35	.....	S	13 46 39·6	−1·0
Oct. 14	CS	W	E	10 40 38·49	+0·27	S	8 56 49·9	−0·1
15	RM	W	E	10 45 1·94	+0·26	S	8 34 36·5	+0·0
19	CS	W	E	11 2 36·14	+0·20	S	7 2 35·9	−2·8
22	RM	W	E	11 15 47·20	+0·08	S	5 50 41·9	−1·8
24	M	W	E	11 24 34·96	+0·05	S	5 1 34·1	+2·1
27	M	W	E	11 37 47·29	−0·00	S	3 46 5·5	+0·3
Nov. 4	M	W	E	12 13 6·79	+0·01	S	0 17 23·6	+1·2
9	M	E	E	12 35 19·83	+0·12	S	− 1 56 39·4	−0·8
17	RM	E	E	13 11 15·60	+0·08	S	− 5 32 34·4	−1·1
22	RM	E	.....	13 34	.....	S	− 7 46 3·9	−1·0
28	CS	E	E	14 1 50·47	−0·04	.....	−10 22	.....
30	M	E	E	14 11 13·50	+0·01	S	−11 12 31·4	+3·4
Dec. 3	CS	E	.....	14 25	.....	S	−12 26 39·8	−3·0
15	M	E	.....	15 24	.....	S	−16 54 59·8	+0·2
1932 Dec. 22	M	E	E	15 59 14·97	−0·02	S	−19 4 41·7	+0·9
1933 Jan. 4	M	W	.....	17 7	.....	S	−21 56 0·3	+1·0
23	RM	W	E	18 50 7·64	+0·11	N	−22 49 19·5	−2·5
24	RM	W	E	18 55 32·85	+0·14	N	−22 45 5·8	+1·1
25	M	W	E	19 0 57·62	+0·08	C	−22 40 17·5	−2·3
30	RM	W	E	19 27 54·44	−0·00	C	−22 5 33·3	+3·1
Feb. 15	M	E	E	20 51 51·72	−0·07	C	−18 26 47·4	+1·3
17	M	E	E	21 2 2·63	−0·04	C	−17 49 3·1	+0·6
27	M	E	.....	21 52	.....	S	−14 11 36·1	+1·1
Mar. 13	M	E	E	22 58 28·68	−0·18	C	− 8 4 46·2	+1·3

VENUS—*Continued*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
18	M	W	E	23 21 38·83	+0·21	N	− 5 41 47·5	−0·6
23	M	W	E	23 44 34·70	−0·17	.....	− 3 15	.....
24	RM	W	E	23 49 8·90	−0·01	N	− 2 45 12·7	−2·4
25	RM	W	E	23 53 42·67	+0·02	S	− 2 15 25·3	−2·7
29	M	W	E	0 11 55·16	−0·06	C	− 0 15 36·8	+0·9
30	M	W	E	0 16 27·74	−0·23	C	+ 0 14 21·6	−1·7
June 1	RM	W	W	5 23 32·48	+0·12	S	+23 42 23·7	+1·0
12	M	E	.....	6 23	.....	C	+24 16 16·2	+0·6
16	CS	E	C	7 44 7·89	+0·08	C	+24 7 3·9	−1·5
22	M	W	W	7 16 10·70	+0·22	C	+23 32 0·6	+1·5
23	RM	W	.....	7 21	.....	C	+23 23 39·9	−1·5
26	M	W	W	7 37 19·12	+0·24	S	+22 53 45·8	+2·3
29	M	W	W	7 53 1·10	+0·22	C	+22 19 48·3	+1·2
July 3	M	W	W	8 13 42·35	+0·19	N	+21 24 14·1	−2·4
5	CS	W	W	8 23 55·83	+0·11	C	+20 52 51·4	−0·2
12	CS	W	.....	8 59	.....	S	+18 45 1·5	−1·1
22	CS	W	W	9 47 32·16	+0·01	N	+15 0 7·2	−0·8
25	RM	W	W	10 1 40·01	+0·03	N	+13 44 28·3	−0·3
28	RM	W	W	10 15 37·51	+0·14	.....	+12 26	.....
31	RM	W	W	10 29 25·12	+0·20	C	+11 3 54·7	−1·2
Aug. 2	CS	W	W	10 38 31·58	+0·06	.....	+10 8	.....
16	RM	E	W	11 40 47·42	+0·22	.....	+ 3 13	.....
21	RM	E	W	12 2 35·84	+0·03	N	+ 0 39 0·6	+0·5
1934 Feb. 21	M	W	E	20 34 34·22	−0·07	.....	−10 38	.....
27	RM	W	E	20 34 14·29	+0·02	N	−11 23 28·7	+2·1
Mar. 8	M	W	E	20 44 0·17	−0·20	N	−12 8 9·7	−2·0
9	RM	W	E	20 45 44·90	+0·04	N	−12 10 54·2	−2·7
10	M	W	E	20 47 36·15	−0·06	N	−12 13 9·2	−3·3
12	M	W	E	20 51 38·18	−0·22	N	−12 16 5·0	−0·6
15	M	W	E	20 58 26·31	−0·08	N	−12 16 44·1	−2·3
19	M	W	E	21 8 43·24	−0·01	N	−12 10 12·5	+0·0
22	M	W	.....	21 17	.....	N	−11 59 44·1	+2·4
23	RM	W	E	21 20 10·44	+0·02	N	−11 55 15·1	−1·2
28	HS	W	E	21 35 49·84	+0·02	N	−11 24 31·4	+2·1
April 5	M	E	E	22 3 13·79	−0·12	N	−10 8 30·0	−1·3
9	M	E	E	22 17 44·08	−0·07	N	− 9 18 38·6	−1·3
10	HS	E	E	22 21 25·69	+0·10	N	− 9 4 59·1	+1·1
13	HS	E	E	22 32 37·82	−0·05	N	− 8 21 29·7	+1·1
18	RM	E	E	22 51 40·68	+0·19	N	− 7 0 46·7	+1·1
20	M	E	.....	22 59	.....	N	− 6 25 51·4	−1·0
April 28	RM	E	E	23 30 46·93	−0·04	N	− 3 52 37·1	−0·5
30	M	E	E	23 38 44·04	−0·02	N	− 3 11 21·6	−1·2
May 1	RM	E	E	23 42 43·57	+0·09	N	− 2 50 19·7	−0·8
4	RM	E	E	23 54 45·11	+0·05	N	− 1 45 47·6	+0·7
8	RM	E	E	0 10 54·80	+0·04	N	− 0 16 51·7	−1·2

VENUS—*Continued*

Date		Obsr.	Clamp	Limb	App. R.A. of centre			Corr. to A.E.	Limb	App. Decl. of centre			Corr. to A.E.
					h	m	s	s		°	′	″	″
	12	M	E	E	0	27	12·78	−0·10	N	+ 1	14	43·5	−1·5
	15	RM	E	E	0	39	32·03	−0·03	N	+ 2	25	45·3	−0·7
	23	M	E	E	1	12	48·71	+0·05	N	+ 5	34	28·0	−1·3
	25	M	E	E	1	21	14·31	+0·02	N	+ 6	22	6·1	−1·6
	26	M	E	E	1	25	28·26	+0·08	N	+ 6	45	54·6	−0·4
	28	HS	E	E	1	33	58·24	+0·01	C	+ 7	33	32·6	−0·7
	30	M	E	E	1	42	31·52	+0·06	N	+ 8	20	35·8	−1·1
June	2	HS	E	E	1	55	27·82	+0·12	N	+ 9	30	52·5	−1·2
	5	M	E	E	2	8	31·90	−0·14	N	+10	40	0·1	−2·7
	8	CS	E	E	2	21	45·00	+0·07	.....	+11	48		.....
	16	HS	E	E	2	57	44·29	+0·10	N	+14	37	41·6	+1·0
	18	M	E	E	3	6	54·68	−0·09	N	+15	20	0·0	−2·2
	20	HS	E	E	3	16	10·00	+0·15	N	+15	59	12·5	+1·6
	23	HS	E	E	3	30	11·05	−0·01	N	+16	55	27·2	+2·3
	25	M	E	E	3	39	37·63	−0·03	N	+17	31	7·2	+0·3
	27	HS	E	E	3	49	9·13	+0·17	N	+18	5	18·5	+1·8
July	3	M	E	.....	4	18		.....	N	+19	37	39·3	−0·4
	9	HS	E	E	4	47	53·33	+0·11	N	+20	53	3·7	−0·7
	14	CS	E	E	5	13	5·85	+0·17	.....	+21	41		.....
	16	HS	E	.....	5	23		.....	C	+21	56	48·2	+0·9
	17	M	E	.....	5	28		.....	C	+22	3	38·5	+2·3
	18	CS	E	E	5	33	30·75	+0·15	.....	+22	10		.....
	23	HS	E	E	5	59	16·47	+0·08	N	+22	31	49·6	−1·0
	25	HS	E	E	6	9	38·32	+0·14	N	+22	36	19·5	+0·9
	26	CS	E	E	6	14	49·84	+0·22	.....	+22	38		.....
	27	HS	E	E	6	20	1·53	+0·12	C	+22	38	15·0	+0·2
Aug.	10	M	E	.....	7	33		.....	S	+21	39	57·9	+1·3
	11	HS	E	E	7	38	2·58	+0·12	C	+21	30	59·8	+0·0
	17	RM	E	E	8	8	54·59	+0·02	N	+20	24	25·3	−0·4
	20	HS	E	E	8	24	11·92	+0·14	N	+19	43	8·1	+0·5
	21	RM	E	E	8	29	15·80	−0·21	C	+19	28	11·5	−1·3
	23	HS	E	E	8	39	22·29	+0·18	N	+18	56	43·5	+0·3
	25	M	E	E	8	49	24·85	−0·07	S	+18	23	5·0	+1·8
	30	HS	E	.....	9	14		.....	C	+16	49	48·4	−1·3
	31	RM	E	E	9	19	12·72	+0·02	S	+16	29	42·5	+0·2
Sept.	11	HS	E	E	10	12	27·82	+0·04	C	+12	19	44·3	−0·6
	12	RM	E	E	10	17	13·21	+0·06	S	+11	54	41·9	−1·1
	19	RM	E	.....	10	50		.....	S	+ 8	50	46·0	+0·9
	21	HS	E	E	10	59	28·48	−0·00	C	+ 7	55	43·4	−0·2
	26	RM	E	E	11	22	36·48	+0·12	S	+ 5	34	20·9	+0·0
	28	HS	E	E	11	31	48·68	+0·06	C	+ 4	36	29·7	−0·8
Oct.	4	M	E	E	11	59	19·22	−0·06	S	+ 1	39	49·4	−0·8
	13	HS	E	E	12	40	32·49	+0·01	C	− 2	49	19·3	−0·2
1935 Feb.	5	RM	W	W	22	28	58·00	−0·10	N	−11	8	28·0	−1·1
	11	M	E	W	22	57	0·00	−0·01	C	− 8	16	0·4	−1·0

VENUS—*Concluded*

Date	Obsr.	Clamp	Limb	App. R.A. of centre	Corr. to A.E.	Limb	App. Decl. of centre	Corr. to A.E.
				h m s	s		° ′ ″	″
Feb. 20	M	E	W	23 38 8·73	+0·16	C	− 3 43 46·8	−1·2
Mar. 7	M	E	.....	0 46	.....	C	+ 4 3 39·0	−1·6
14	M	E	W	1 17 1·24	+0·16	S	+ 7 37 51·9	+0·9
18	M	E	W	1 35 8·96	+0·11	S	+ 9 36 44·4	0·0
20	RM	E	W	1 44 15·96	+0·09	S	+10 34 53·8	−1·4
25	M	E	W	2 7 15·00	+0·17	S	+12 55 53·4	−0·3
26	RM	E	W	2 11 52·84	+0·02	.....	+13 23	.....
April 3	M	E	.....	2 49	.....	C	+16 49 31·9	+2·6

CATALOGUE OF 1,589 STARS

OBSERVED IN THE YEARS 1923 TO 1935

REDUCED WITHOUT PROPER MOTION

TO THE

EQUINOX 1925·0

EXPLANATION OF THE SEPARATE COLUMNS

Column 1. The number of the star in this catalogue, the stars being arranged in order of right ascension.

Column 2. The star's name as obtained from the B.H. star list and other catalogues.

Column 3. The magnitude and spectral type as obtained from G.C. and Henry Draper.

Columns 4 and *8.* The mean right ascension and declination as determined at Ottawa, reduced to the equinox 1925·0 without proper motion.

Columns 5 and 6, 9 and 10. The precession and secular variation for the stars given on the basis of 100 years. The values were obtained from other catalogues and are based on Newcomb's precession tables.

Columns 7 and 11. Proper motion in right ascension and declination per 100 years. The proper motions were taken from the G.C. and the First Greenwich Catalogue of Stars 1925·0 for Stars not in the G.C.

Column 12. The numbers indicate the observations in right ascension and declination respectively.

Columns 13 and 14. Mean epochs of observations for right ascension and declination. Where only one figure is given it applies to both.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1	BD + 13°, 5201...	7·26 F 0	0 0 4·894	+307·29	+ 0·46	+ 0·71	+13 57 41·93	+2004·5	− 0·4	− 1·1	7 8	25·31 25·36
2	BD + 26°, 4744...	6·57 G 5	0 1 9·479	+307·63	+ 0·87	+ 0·50	+27 15 26·94	+2004·4	− 0·5	− 0·5	7 8	26·81 26·96
3	Gr. 4223.....	6·51 A 0	0 1 17·932	+308·03	+ 1·59	− 0·15	+44 48 43·22	+2004·4	− 0·6	− 1·7	6 8	31·13 31·04
4	BD + 39°, 5219...	6·71 G 5	0 2 12·154	+308·36	+ 1·36	+ 0·10	+40 0 4·47	+2004·4	− 0·6	− 0·5	7	26·54
5	9H Ceti.....	6·06 F 0	0 2 59·946	+306·52	− 0·54	+ 0·72	−23 31 26·96	+2004·3	− 0·7	− 3·9	4 5	31·19 31·20
6	Br. 3213.....	6·33 B 8	0 3 53·523	+307·16	+ 0·03	+ 0·14	− 2 57 58·76	+2004·2	− 0·8	+ 0·3	5 4	25·41 25·33
7	α Andr.....	2·15 A 0	0 4 30·372	+308·72	+ 0·93	+ 1·02	+28 40 34·50	+2004·1	− 0·9	−16·1	9	29·56
8	β Cass.....	2·42 F 5	0 5 9·958	+312·24	+ 2·64	+ 6·76	+58 44 9·74	+2004·0	− 0·9	−17·8	5	26·82
9	BD + 16°, 3.....	7·17 G 0	0 5 27·828	+308·26	+ 0·57	− 0·05	+17 7 9·35	+2003·9	− 1·0	−13·5	8 10	26·17 26·00
10	BD + 56°, 11.....	6·54 B 8	0 6 33·205	+313·11	+ 2·47	+ 0·27	+56 44 53·68	+2003·6	− 1·1	+ 0·9	4	26·28
11	BD − 13°, 13.....	5·94 K 0	0 6 52·389	+306·36	− 0·23	+ 1·04	−12 59 46·60	+2003·6	− 1·1	− 3·2	5 6	27·41 27·50
12	Gr. 7.....	7·15 A 0	0 7 50·066	+317·40	+ 3·64	+ 0·21	+65 42 33·35	+2003·3	− 1·2	+ 0·7	10 11	29·12 29·83
13	γ Pegs.....	2·87 B 2	0 9 22·245	+308·72	+ 0·52	− 0·01	+14 46 0·03	+2002·8	− 1·3	− 1·0	20 39	28·28 28·92
14	BD + 3°, 26.....	7·02 A 0	0 12 6·160	+307·75	+ 0·23	+ 0·06	+ 3 50 5·04	+2001·7	− 1·6	− 1·3	3 2	30·14 30·76
15	BD + 22°, 34.....	7·18 K 0	0 13 1·425	+310·48	+ 0·77	+ 0·26	+22 50 22·97	+2001·2	− 1·7	− 1·2	4	28·47
16	BD + 11°, 34.....	6·63 G 5	0 14 4·193	+309·08	+ 0·46	− 0·13	+12 21 18·95	+2000·7	− 1·8	− 1·2	6	27·95
17	Pi 0h, 38.....	5·80 A 0	0 14 42·857	+312·45	+ 1·06	+ 0·47	+31 6 3·39	+2000·3	− 1·9	− 0·1	3	29·49
18	Br. 13.....	6·04 B 9	0 14 44·445	+315·40	+ 1·62	+ 0·14	+43 22 29·05	+2000·3	− 1·9	− 0·2	4	28·78
19	BD − 8°, 38.....	6·50 G 0	0 14 50·431	+305·99	− 0·08	+ 2·75	− 8 28 0·33	+2000·3	− 1·9	−13·4	3	31·78
20	ι Ceti.....	3·75 K 0	0 15 36·405	+305·80	− 0·10	− 0·12	− 9 14 22·52	+1999·8	− 1·9	− 2·9	4 7	27·22 26·03
21	BD − 18°, 41.....	6·88 K 0	0 16 14·695	+304·18	− 0·34	+ 0·36	−18 6 59·35	+1999·4	− 2·0	+ 0·2	4 5	29·07 28·39
22	Br. 23.....	5·72 B 9	0 21 2·294	+323·32	+ 2·30	+ 0·23	+52 37 53·49	+1996·0	− 2·6	− 0·4	8 9	25·17 25·23
23	Pi 0h, 78.....	7·54 M 3	0 24 12·160	+304·27	− 0·15	+ 0·31	−12 4 24·65	+1993·3	− 2·8	− 1·8	2 3	26·78 27·12
24	Br. 33.....	6·46 K 2	0 24 18·638	+311·35	+ 0·60	+ 0·07	+16 1 49·53	+1993·2	− 2·8	− 1·5	7 9	27·97 26·89
25	BD + 9°, 47.....	6·02 F 2	0 24 27·224	+309·73	+ 0·42	+ 0·19	+ 9 46 45·35	+1993·1	− 2·8	−20·5	10 9	26·21 26·46
26	BD − 21°, 57.....	6·41 G 0	0 24 35·442	+301·86	− 0·38	− 0·83	−20 44 50·57	+1992·9	− 2·8	−10·5	7 6	26·68 26·34
27	BD + 63°, 53.....	7·16 A 0	0 25 59·779	+338·76	+ 3·88	+ 0·25	+64 20 4·94	+1991·6	− 3·2	+ 0·8	7 11	27·12 26·86
28	Br. 35.....	5·26 F 0	0 26 9·561	+315·83	+ 1·04	+ 0·28	+29 20 18·30	+1991·4	− 3·0	− 5·3	5 6	24·97 25·09
29	BD + 38°, 68.....	7·05 F 0	0 28 41·991	+320·52	+ 1·45	− 0·04	+38 25 49·69	+1988·8	− 3·3	− 1·8	7	25·39
30	CD − 26°, 160....	6·87 K 0	0 28 55·232	+299·16	− 0·50	− 0·03	−25 46 20·74	+1988·5	− 3·2	− 4·4	4 5	26·56 26·21
31	13 Ceti.....	5·24 G 0	0 31 23·283	+306·00	+ 0·08	+ 2·74	− 4 0 19·59	+1985·7	− 3·5	− 2·0	48 81	28·80 28·77
32	Br. 54.....	5·86 B 3	0 32 52·615	+312·33	+ 0·59	+ 0·01	+14 49 9·08	+1983·9	− 3·7	− 1·6	4 6	27·86 26·93
33	Pi 0h, 131.....	6·58 K 0	0 33 38·687	+308·21	+ 0·26	+ 0·60	+ 2 43 26·41	+1982·9	− 3·7	− 5·5	3 4	26·15 26·60
34	Br. 48.....	6·40 F 8	0 34 1·945	+449·41	+20·59	− 5·38	+82 4 48·52	+1982·4	− 5·3	+ 9·1	9 8	30·21 30·31
35	Gr. 113.....	5·72 K 2	0 35 0·556	+330·62	+ 2·14	+ 0·04	+48 56 33·51	+1981·1	− 4·1	− 1·0	5 7	26·80 26·65
36	Br. 58.....	6·08 K 0	0 35 27·378	+315·12	+ 0·78	− 3·32	+20 50 45·23	+1980·5	− 4·0	−36·9	10 11	26·18 26·08
37	α Cass.....	* K 0	0 36 14·354	+338·63	+ 2·83	+ 0·60	+56 7 34·97	+1979·5	− 4·3	− 2·9	6 9	29·23 28·34
38	Pi 0h, 144.....	6·46 G 5	0 36 42·848	+300·79	− 0·23	+ 0·23	−16 55 39·57	+1978·8	− 3·9	− 3·4	5 7	29·23 29·39
39	Pi 0h, 146.....	6·12 G 5	0 36 53·222	+305·50	+ 0·08	− 0·12	− 4 45 47·06	+1978·6	− 4·0	− 1·4	5	25·43
40	β Ceti.....	2·24 K 0	0 39 49·554	+299·60	− 0·26	+ 1·62	−18 23 52·19	+1974·3	− 4·2	+ 4·0	5 7	27·64 26·97
41	BD + 32°, 122....	7·02 A 5	0 39 49·806	+322·23	+ 1·24	+ 0·03	+32 53 59·87	+1974·3	− 4·5	+ 1·4	11 10	26·44 26·58
42	BD + 58°, 101....	6·49 G 5	0 42 19·236	+348·38	+ 3·32	− 0·11	+59 9 53·71	+1970·4	− 5·1	+ 0·3	8	25·33
43	Br. 80.....	6·20 G 5	0 43 30·746	+310·08	+ 0·38	+ 0·06	+ 6 19 54·62	+1968·5	− 4·7	− 1·1	9 10	26·06
44	Pi 0h, 184.....	7·06 K 0	0 43 44·135	+319·58	+ 0·98	+ 0·77	+25 52 55·62	+1968·1	− 4·8	+ 1·0	4 5	26·56 26·42
45	BD − 22°, 134....	5·45 B 9	0 44 18·385	+296·84	− 0·34	+ 0·15	−22 7 53·14	+1967·1	− 4·6	− 0·6	3 4	27·52 27·85

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 37. $2^m.1$ to $2^m.6$

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
46	δ Pisc.	4·55 K 5	0 44 47·324	+310·55	+ 0·40	+ 0·56	+ 7 10 37·64	+1966·3	− 4·8	− 4·7	20 28	28·89 29·58
47	Br. 86	5·23 F 5	0 45 1·972	+315·03	+ 0·67	− 0·06	+16 32 8·96	+1965·9	− 4·9	−20·1	4 5	26·82 26·43
48	Pi 0h, 198	5·84 K 2	0 45 39·615	+300·70	− 0·13	+ 0·70	−13 58 4·27	+1964·8	− 4·8	− 9·2	4	30·76
49	BD − 1°, 104	6·80 K 0	0 46 4·424	+306·99	+ 0·20	+ 0·21	− 0 37 56·71	+1964·1	− 4·9	+ 1·4	10 8	30·94 30·59
50	Pi 0h, 196	6·12 A 0	0 46 6·430	+333·61	+ 1·90	+ 0·64	+44 35 37·61	+1964·0	− 5·3	+ 0·5	5	28·79
51	20 Ceti	4·92 K 0	0 49 10·433	+306·51	+ 0·19	+ 0·03	− 1 33 3·98	+1958·5	− 5·2	− 1·2	7 5	30·36 30·41
52	BD + 36°, 148	6·13 K 0	0 49 20·632	+328·80	+ 1·48	+ 0·08	+37 0 42·81	+1958·2	− 5·5	− 4·5	5	29·83
53	γ Cass	* B 0	0 52 9·952	+360·17	+ 3·65	+ 0·35	+60 18 39·46	+1952·8	− 6·3	− 0·2	13 12	32·10 31·40
54	BD + 13°, 127	6·83 G 5	0 52 12·818	+314·55	+ 0·60	+ 0·00	+13 32 45·59	+1952·7	− 5·6	− 0·6	7	26·23
55	CD − 28°, 288	6·20 M 0	0 52 17·290	+291·09	− 0·46	− 0·05	−28 10 53·90	+1952·5	− 5·2	+ 0·6	4	28·60
56	μ Andr.	3·94 A 2	0 52 34·967	+331·10	+ 1·55	+ 1·29	+38 5 35·07	+1951·9	− 5·9	+ 3·4	4 3	25·80 26·09
57	BD + 0°, 149	7·29 G 5	0 53 48·365	+308·03	+ 0·28	+ 0·07	+ 1 22 48·55	+1949·5	− 5·6	+ 1·3	4 5	28·30 28·62
58	BD + 20°, 131	6·41 A 0	0 54 18·884	+319·32	+ 0·84	− 0·06	+20 59 58·27	+1948·4	− 5·9	− 0·1	3 6	30·83 27·97
59	BD − 6°, 176	6·70 K 0	0 54 57·779	+303·78	+ 0·09	+ 0·00	− 6 17 9·69	+1947·1	− 5·7	− 7·4	8	30·72
60	α Sclp.	4·39 B 5	0 54 59·586	+289·12	− 0·48	+ 0·08	−29 45 44·49	+1947·0	− 5·4	+ 0·5	5 4	32·24 32·34
61	BD + 68°, 64	6·67 B 9	0 56 32·603	+392·10	+ 6·07	− 0·04	+68 57 17·29	+1943·8	− 7·4	− 0·1	12 13	29·94 30·21
62	BD − 17°, 180	6·58 G 5	0 57 55·325	+297·28	− 0·15	+ 0·43	−16 40 2·31	+1940·8	− 5·8	− 7·7	5 7	27·39 26·77
63	43H Ceph.	4·52 K 0	0 58 11·411	+770·48	+80·23	+ 7·57	+85 51 20·39	+1940·2	−14·5	− 0·5	151 170	30·13 29·48
64	ε Pisc.	4·45 K 0	0 59 2·857	+311·75	+ 0·45	− 0·55	+ 7 29 12·52	+1938·3	− 6·2	+ 2·9	7 12	28·36 28·06
65	BD + 51°, 220	6·27 K 2	0 59 37·270	+351·44	+ 2·63	+ 0·10	+52 6 3·95	+1937·0	− 7·0	− 5·6	4	27·22
66	BD + 28°, 174	6·08 F 5	1 0 21·333	+326·77	+ 1·16	+ 0·62	+29 15 32·74	+1935·4	− 6·6	−11·3	4	25·57
67	106G Ceti	6·29 G 5	1 2 29·778	+290·96	− 0·32	− 0·19	−24 23 34·54	+1930·4	− 6·1	− 4·2	4 4	29·27 27·78
68	Br. 131	6·29 F 2	1 3 51·947	+329·91	+ 1·27	+ 1·56	+31 36 44·10	+1927·1	− 7·0	− 3·4	4 6	29·38 28·70
69	Br. 132	5·63 A 2	1 3 55·507	+320·92	+ 0·84	+ 0·60	+20 20 26·79	+1927·0	− 6·8	− 9·2	4	26·77
70	Br. 135	5·87 F 2	1 3 59·885	+300·66	+ 0·02	+ 1·00	−10 11 10·14	+1926·8	− 6·4	+ 2·3	2	25·79
71	BD + 9°, 132	6·90 M 0	1 4 26·388	+313·49	+ 0·51	− 0·05	+ 9 30 29·30	+1925·8	− 6·7	+ 0·7	6 8	25·64 26·92
72	η Ceti	3·60 K 0	1 4 49·049	+300·32	+ 0·01	+ 1·44	−10 34 46·32	+1924·8	− 6·5	−13·2	23 38	30·03 30·27
73	β Andr.	2·37 M 0	1 5 31·577	+333·89	+ 1·45	+ 1·45	+35 13 24·67	+1923·1	− 7·3	−11·3	4 5	29·28 27·45
74	Br. 139	5·49 B 8	1 6 47·065	+388·21	+ 4·86	+ 0·38	+64 37 13·53	+1920·0	− 8·5	− 1·1	8 8	30·17 29·48
75	BD + 45°, 291	6·86 K 5	1 6 49·268	+346·76	+ 2·11	+ 0·02	+45 47 8·00	+1919·9	− 7·7	− 2·5	4	29·04
76	Br. 156	6·93 G 5	1 9 1·103	+302·29	+ 0·10	− 0·40	− 7 10 50·87	+1914·3	− 6·9	− 1·1	6 7	26·26 26·06
77	Br. 165	5·82 F 5	1 10 59·298	+306·30	+ 0·25	− 0·11	− 1 22 28·25	+1909·1	− 7·2	+21·0	6 9	27·76 26·80
78	BD + 38°, 229	6·55 B 9	1 12 59·692	+341·27	+ 1·69	− 0·14	+39 5 7·47	+1903·7	− 8·2	+ 0·5	4	27·08
79	Gr. 282	7·25 K 5	1 13 19·368	+348·20	+ 2·03	+ 0·05	+44 14 12·73	+1902·8	− 8·4	− 0·5	4	26·73
80	89 Pisc.	5·28 A 2	1 13 55·661	+309·66	+ 0·37	− 0·35	+ 3 13 12·13	+1901·1	− 7·6	− 1·9	32 63	29·14 28·85
81	BD + 57°, 257	7·9 B 5	1 15 7·897	+375·63	+ 3·52	− 0·01	+57 48 51·62	+1897·8	− 9·2	+ 0·2	2	28·38
82	φ Cass.	5·25 F 5	1 15 20·935	+375·90	+ 3·53	+ 0·00	+57 50 16·47	+1897·1	− 9·2	+ 0·1	2 4	30·78 31·05
83	BD − 16°, 223	6·75 G 0	1 16 16·452	+294·59	− 0·08	+ 0·38	−16 12 20·26	+1894·5	− 7·4	− 9·4	4 5	28·86 28·66
84	BD + 21°, 178	7·24 K 5	1 17 10·549	+325·10	+ 0·93	+ 0·08	+21 58 54·06	+1891·9	− 8·2	+ 0·6	6 8	26·58 26·26
85	BD + 10°, 168	6·89 F 0	1 17 21·584	+316·00	+ 0·59	+ 0·36	+11 8 38·29	+1891·4	− 8·0	+ 1·5	8 11	28·29 27·51
86	θ Ceti	3·83 K 0	1 20 16·382	+300·37	+ 0·10	− 0·54	− 8 34 12·67	+1882·8	− 7·9	−21·5	24 51	29·77 30·02
87	δ Cass.	2·80 A 5	1 20 53·719	+386·80	+ 3·95	+ 3·94	+59 50 46·09	+1880·9	−10·1	− 4·6	4 6	28·56 27·52
88	BD − 3°, 195	6·38 G 5	1 20 59·945	+304·66	+ 0·23	+ 0·11	− 3 14 19·34	+1880·6	− 8·1	− 2·9	4 5	27·03 26·58
89	BD + 26°, 239	6·87 K 0	1 22 34·745	+331·14	+ 1·12	− 0·06	+26 51 29·94	+1875·7	− 8·9	− 4·9	6	26·80
90	94 Pisc.	5·63 K 0	1 22 38·327	+323·38	+ 0·83	+ 0·30	+18 51 8·04	+1875·6	− 8·7	− 6·0	5 5	28·22 27·79

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 53. $1^m.6$ to $2^m.3$

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
91	Br. 192	5·68 F 0	1 23 9·467	+295·94	+ 0·00	+ 0·10	−13 26 45·23	+1874·0	− 8·1	+ 1·2	5 6	27·18 26·79
92	Br. 201	6·55 K 0	1 26 10·143	+283·34	− 0·25	+ 0·25	−26 0 18·51	+1864·5	− 8·0	+ 2·0	6 7	26·28 26·78
93	η Pisc	3·72 G 5	1 27 27·969	+320·58	+ 0·72	+ 0·18	+14 57 34·90	+1860·3	− 9·1	− 0·6	19 45	29·11 29·66
94	BD + 34°, 265	6·28 B 8	1 27 50·585	+341·52	+ 1·47	− 0·10	+34 24 51·78	+1859·0	− 9·7	− 0·1	4	31·11
95	BD + 54°, 315	7·17 K 5	1 28 40·960	+378·13	+ 3·14	− 0·06	+54 33 35·46	+1856·3	−10·8	+ 1·9	4	31·38
96	BD − 7°, 256	5·88 G 0	1 29 56·401	+300·64	+ 0·15	+ 1·20	− 7 24 29·34	+1852·1	− 8·8	− 7·5	6 7	29·28 29·36
97	Br. 211	6·20 B 9	1 31 45·549	+320·54	+ 0·70	+ 0·02	+14 16 42·38	+1845·9	− 9·5	− 0·9	3 5	26·80 26·40
98	Br. 207	6·17 K 0	1 31 51·442	+365·88	+ 2·45	− 0·15	+48 20 25·84	+1845·6	−10·8	− 1·6	7 7	28·55 28·39
99	Br. 213	5·48 K 0	1 32 19·445	+292·47	− 0·02	+ 0·11	−15 46 59·34	+1844·0	− 8·7	+ 2·2	4 5	29·84 29·09
100	Br. 205	6·62 B 9	1 33 51·546	+549·06	+16·30	+ 0·54	+77 35 19·63	+1838·7	−16·3	− 0·7	10 11	30·58 30·65
101	α U. Min	2·12 F 8	1 34 14·403	+3096·76	+1369·08	+16·04	+88 54 10·95	+1837·4	−90·6	− 0·1	109 125	28·93 28·71
102	BD + 20°, 264	6·86 K 2	1 34 30·562	+327·86	+ 0·92	+ 0·36	+21 1 1·96	+1836·4	−10·0	− 0·3	4 3	27·36 27·87
103	π Andr	4·90 B 8	1 36 8·605	+353·27	+ 1·82	+ 0·11	+40 11 52·27	+1830·7	−10·9	− 2·3	5	27·57
104	ν Pisc	4·68 K 0	1 37 31·531	+312·21	+ 0·46	− 0·16	+ 5 6 31·65	+1825·7	− 9·8	+ 0·5	16 37	30·29 29·71
105	Gr. 371	6·46 K 0	1 38 42·007	+362·96	+ 2·17	+ 1·35	+44 56 41·65	+1821·4	−11·4	− 1·5	4 3	28·60 28·49
106	BD − 4°, 260	5·27 G 5	1 38 55·905	+303·30	+ 0·25	− 0·02	− 4 4 3·26	+1820·6	− 9·6	− 3·0	4 5	28·77 28·99
107	τ Ceti	3·65 K 0	1 40 34·312	+290·64	− 0·01	−11·94	−16 19 49·55	+1814·5	− 9·4	+85·8	5 4	30·77 30·32
108	o Pisc	4·50 K 0	1 41 25·819	+316·12	+ 0·56	+ 0·48	+ 8 46 51·44	+1811·3	−10·3	+ 5·3	15 27	29·45 28·80
109	Pi 1h, 159	5·74 K 0	1 42 18·585	+422·90	+ 5·05	+ 8·73	+63 28 58·61	+1808·1	−13·7	−24·4	10 10	29·78 29·74
110	CD − 27°, 595	6·42 A 5	1 42 32·975	+276·90	− 0·21	+ 0·69	−27 43 23·21	+1807·1	− 9·1	− 4·9	5	32·17
111	BD − 14°, 335	6·76 B 9	1 43 18·790	+292·48	+ 0·04	+ 0·25	−14 15 47·92	+1804·2	− 9·7	+ 0·8	5	32·21
112	BD − 21°, 300	6·69 K 0	1 44 5·310	+284·52	− 0·09	+ 0·22	−21 13 5·31	+1801·3	− 9·5	− 4·0	6	31·96
113	Br. 235	5·73 A 0	1 44 6·594	+324·74	+ 0·79	+ 0·35	+16 34 58·24	+1801·2	−10·8	− 3·1	3 6	29·10 27·77
114	Gr. 379	6·92 F 5	1 45 0·952	+531·30	+12·78	+ 1·93	+75 13 7·76	+1797·7	−17·5	− 3·3	11 10	31·23
115	BD + 25°, 305	6·73 B 8	1 45 14·292	+336·30	+ 1·12	− 0·03	+26 6 1·10	+1796·8	−11·2	− 0·2	4 8	26·81 27·71
116	BD + 80°, 58	7·60 K 0	1 47 21·883	+669·42	+27·12	+ 4·80	+80 32 28·06	+1788·5	−22·4	− 8·2	8 11	31·02 30·97
117	ζ Ceti	3·92 K 0	1 47 45·439	+295·84	+ 0·13	+ 0·23	−10 42 17·79	+1787·0	−10·1	− 3·6	18 26	28·32 28·30
118	ε Cass	3·44 B 3	1 48 58·696	+428·92	+ 5·06	+ 0·52	+63 18 6·29	+1782·1	−14·7	− 1·6	10 11	31·36 31·31
119	ξ Pisc	4·84 K 0	1 49 40·213	+310·31	+ 0·42	+ 0·14	+ 2 49 5·25	+1779·3	−10·8	+ 2·7	11 16	28·19 27·53
120	ω Cass	5·03 B 8	1 50 8·748	+462·67	+ 7·02	+ 0·22	+68 19 4·06	+1777·4	−16·0	− 0·8	9 10	28·73 28·80
121	BD + 8°, 292	7·05 M 0	1 50 24·410	+316·44	+ 0·56	+ 0·08	+ 8 24 45·85	+1776·3	−11·1	+ 0·4	4	27·56
122	β Arie	2·72 A 5	1 50 29·555	+330·37	+ 0·92	+ 0·70	+20 26 31·15	+1776·0	−11·5	−11·0	11 16	28·53 28·86
123	BD + 30°, 310	7·21 M 3	1 53 44·339	+345·17	+ 1·33	− 0·25	+30 46 12·11	+1762·7	−12·4	− 3·6	5 5	27·64 27·32
124	Pi 1h, 223	6·14 A 2	1 55 24·710	+320·91	+ 0·67	+ 0·02	+11 55 53·89	+1755·6	−11·7	− 3·4	4 6	26·59 26·88
125	BD + 59°, 376	6·74 A 0	1 55 32·702	+417·29	+ 4·17	+ 0·72	+59 35 48·61	+1755·1	−15·1	− 3·1	4 5	29·10 28·85
126	Br. 271	5·84 G 0	1 56 14·992	+310·39	+ 0·43	+ 1·54	+ 2 44 19·98	+1752·1	−11·4	−24·5	4 5	28·10 27·67
127	ν Ceti	4·18 M 0	1 56 28·299	+281·74	− 0·05	+ 0·91	−21 26 26·19	+1751·1	−10·4	− 1·8	7 6	29·89 30·87
128	BD − 9°, 380	5·72 M 3	1 56 43·409	+297·09	+ 0·18	+ 0·63	− 8 53 11·62	+1750·1	−10·9	− 0·5	3 6	29·49 29·50
129	Br. 269	4·99 B 8	1 57 17·612	+397·77	+ 3·21	+ 0·42	+54 7 32·74	+1747·6	−14·6	+ 0·1	6 7	29·88 29·29
130	γ Andr	2·28 K 0	1 59 17·188	+367·05	+ 1·98	+ 0·41	+41 58 14·67	+1739·0	−13·7	− 5·0	4 6	26·12 26·48
131	Br. 280	5·56 A 5	1 59 20·749	+307·01	+ 0·37	+ 0·51	− 0 13 56·74	+1738·8	−11·5	+ 2·2	9 10	26·43 27·06
132	CD − 24°, 872	6·51 K 0	1 59 23·943	+277·32	− 0·09	− 0·20	−24 14 47·65	+1738·5	−10·4	− 3·4	6 5	30·84 31·01
133	BD − 18°, 356	7·30 K 5	2 0 19·534	+285·68	+ 0·02	+ 0·04	−17 52 23·49	+1734·5	−10·8	− 1·3	2 3	26·86 28·49
134	α Arie	2·23 K 2	2 2 56·448	+336·42	+ 1·02	+ 1·39	+23 6 30·38	+1722·9	−12·9	−14·6	6 9	27·87 26·92
135	Br. 288	4·77 A 2	2 3 57·200	+360·08	+ 1·69	+ 1·33	+37 30 15·23	+1718·4	−13·9	− 3·8	7 6	25·71 25·99

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
136	CD − 28°, 675....	7·22 A 5	2 4 45·387	+270·60	− 0·13	+ 0·52	−27 55 37·77	+1714·7	−10·6	− 1·3	7 7	29·07 30·89
137	β Tria.....	3·08 A 5	2 5 4·418	+355·19	+ 1·53	+ 1·22	+34 37 59·51	+1713·3	−13·8	− 4·2	6	27·32
138	Br. 256.....	6·86 K 0	2 5 5·492	+889·97	+51·63	+ 3·56	+83 12 39·78	+1713·2	−34·0	− 2·9	9 12	30·07 30·12
139	BD − 13°, 400....	7·30 A 0	2 7 7·478	+290·67	+ 0·12	+ 0·03	−13 16 46·34	+1703·9	−11·5	− 1·0	6 4	29·34 28·58
140	Br. 302.....	5·74 G 0	2 7 23·278	+317·47	+ 0·58	− 0·95	+ 8 13 9·84	+1702·7	−12·6	−10·9	4 5	27·16 27·49
141	Br. 301.....	5·43 G 0	2 8 0·771	+348·09	+ 1·30	− 0·49	+29 57 8·38	+1699·8	−13·8	− 6·1	4 5	27·30 26·85
142	Br. 300.....	5·08 K 0	2 8 30·465	+375·62	+ 2·13	− 0·21	+43 52 50·31	+1697·5	−14·9	− 1·0	6 5	30·17 29·84
143	ξ^1 Ceti.....	4·54 G 5	2 9 1·280	+317·93	+ 0·59	− 0·16	+ 8 29 44·59	+1695·1	−12·7	− 0·3	12 18	31·09 31·43
144	Br. 315.....	5·64 F 5	2 11 27·091	+340·63	+ 1·08	− 0·68	+24 41 46·04	+1683·7	−13·8	− 8·0	6 8	27·84 28·08
145	δ Tria.....	5·07 G 0	2 12 28·528	+356·31	+ 1·49	+ 9·28	+33 52 53·84	+1678·9	−14·5	−23·8	6 7	29·34 28·70
146	θ Arie.....	5·69 A 0	2 13 56·915	+333·47	+ 0·90	− 0·09	+19 33 18·09	+1671·7	−13·8	+ 0·0	30 51	28·97 29·11
147	BD + 12°, 315....	7·76 A 5	2 14 2·210	+324·43	+ 0·71	− 0·02	+13 5 3·12	+1671·3	−13·4	− 2·6	4 5	30·81 31·00
148	Pi 2h, 52.....	5·82 F 8	2 14 7·643	+309·09	+ 0·42	+ 2·48	+ 1 24 16·57	+1670·9	−12·8	+38·2	4 5	31·78 30·83
149	Br. 319.....	5·12 A 0	2 14 25·772	+386·69	+ 2·40	− 0·58	+47 2 5·35	+1669·4	−16·0	− 0·6	4 6	29·31 28·48
150	Br. 335.....	5·62 A 5	2 18 23·006	+305·66	+ 0·37	− 0·16	− 1 13 32·52	+1650·0	−13·0	− 4·9	9 10	25·20 25·19
151	BD − 18°, 409....	5·99 K 0	2 18 32·897	+282·60	+ 0·07	+ 0·10	−18 0 9·36	+1649·2	−12·1	− 5·5	5 6	27·63 27·17
152	CD − 26°, 857....	6·58 K 0	2 20 57·879	+269·36	− 0·04	+ 0·19	−26 11 12·85	+1637·1	−11·7	+ 3·0	8 7	27·12 27·57
153	BD − 20°, 455....	6·05 K 0	2 23 6·000	+278·26	+ 0·04	+ 0·54	−20 22 53·84	+1626·3	−12·2	+10·4	4 5	29·30 29·20
154	Br. 342.....	5·38 F 0	2 23 45·760	+351·36	+ 1·27	− 0·13	+29 20 7·58	+1622·9	−15·4	− 8·4	4 5	27·55 27·01
155	ξ^2 Ceti.....	4·34 A 0	2 24 10·084	+318·51	+ 0·58	+ 0·27	+ 8 7 28·95	+1620·8	−14·0	− 0·4	30 47	29·35 29·38
156	BD + 8°, 385.....	6·30 K 0	2 25 34·818	+320·17	+ 0·61	− 0·10	+ 9 13 54·18	+1613·5	−14·2	+ 1·5	4 5	30·35 29·87
157	Br. 349.....	6·14 F 0	2 26 25·822	+335·54	+ 0·90	+ 0·57	+19 31 22·99	+1609·1	−14·9	− 3·6	4 5	29·14 29·07
158	Br. 350.....	5·35 K 0	2 27 31·045	+365·15	+ 1·58	+ 0·38	+35 48 56·18	+1603·4	−16·3	+ 1·6	7	26·52
159	BD + 10°, 340....	7·00 A 0	2 30 22·686	+323·54	+ 0·66	+ 0·17	+11 16 36·77	+1588·2	−14·7	− 4·5	10 12	26·92 27·00
160	Pi 2h, 115.....	7·34 *	2 31 38·294	+411·00	+ 2·88	+ 0·04	+51 38 5·35	+1581·5	−18·7	− 0·7	5	28·87
161	Br. 365.....	5·71 K 5	2 32 18·408	+295·47	+ 0·26	− 0·25	− 8 9 25·13	+1577·9	−13·6	− 5·5	4 5	28·70 29·00
162	BD + 61°, 445....	6·80 B 9	2 33 6·514	+464·73	+ 4·89	+ 0·30	+62 16 3·87	+1573·6	−21·3	− 2·0	8 10	31·21 31·08
163	BD + 61°, 448....	7·28 A 0	2 34 8·653	+465·72	+ 4·89	+ 0·30	+62 16 44·59	+1567·9	−21·5	− 1·5	2 3	27·92 28·22
164	δ Ceti.....	4·04 B 2	2 35 38·135	+307·29	+ 0·41	+ 0·08	+ 0 0 21·27	+1559·8	−14·4	+ 0·2	23 35	28·45 28·19
165	BD + 58°, 504....	7·18 F 5	2 36 4·159	+445·41	+ 4·00	+ 0·52	+58 39 23·36	+1557·4	−20·8	− 0·9	6 4	31·84 31·88
166	BD − 16°, 484....	7·30 A 2	2 36 28·935	+282·10	+ 0·13	+ 0·15	−16 37 48·27	+1555·1	−13·3	+ 0·2	4	32·32
167	Br. 344.....	5·92 K 0	2 36 51·139	+848·81	+33·85	+ 0·72	+81 7 58·03	+1553·1	−39·4	− 6·8	11 13	30·56 30·43
168	BD + 47°, 683....	6·56 G 5	2 37 59·242	+401·50	+ 2·45	+ 0·07	+47 56 46·24	+1546·8	−18·9	+ 0·3	5	28·84
169	θ Pers.....	4·22 F 8	2 39 4·163	+405·31	+ 2·55	+ 3·42	+48 54 44·44	+1540·8	−19·2	− 8·6	6	30·57
170	Br. 376.....	5·58 G 5	2 39 11·485	+389·82	+ 2·10	+ 0·04	+43 58 45·44	+1540·0	−18·5	− 0·5	4 5	29·15 28·91
171	BD − 3°, 426.....	6·64 K 0	2 39 41·288	+303·01	+ 0·36	+ 0·14	− 2 50 58·87	+1537·3	−14·5	+ 0·7	4	32·11
172	μ Ceti.....	4·36 F 0	2 40 53·117	+322·18	+ 0·63	+ 1·92	+ 9 47 54·14	+1530·5	−15·5	− 3·0	21 35	28·80 28·51
173	CD − 26°, 996....	6·87 G 0	2 40 54·595	+265·54	+ 0·02	+ 1·23	−25 48 47·90	+1530·4	−12·8	+ 5·3	4 3	32·86 32·83
174	Br. 373.....	* A 0	2 42 7·878	+537·36	+ 7·87	+ 0·08	+69 19 13·08	+1523·5	−25·8	+ 3·7	11 11	31·19 30·84
175	BD + 35°, 553....	6·38 G 5	2 42 19·812	+369·68	+ 1·54	+ 0·42	+35 40 9·73	+1522·3	−17·9	− 0·4	4 5	30·13 29·87
176	BD − 22°, 479....	6·49 F 5	2 43 20·620	+272·06	+ 0·07	+ 0·66	−21 57 13·82	+1516·6	−13·3	+ 1·4	3	31·00
177	Br. 393.....	6·04 K 0	2 44 19·487	+335·77	+ 0·84	+ 0·32	+17 58 19·97	+1510·9	−16·4	− 3·5	5 6	27·66 27·40
178	BD − 13°, 530....	* M 3	2 44 20·188	+287·37	+ 0·20	+ 0·05	−12 46 19·75	+1510·9	−14·1	− 3·4	2 6	28·76 27·24
179	Gr. 569.....	7·92 G 5	2 50 52·311	+592·56	+10·22	+ 0·76	+72 22 16·51	+1472·7	−29·6	− 1·7	9 10	28·51 28·95
180	BD − 5°, 541.....	7·30 K 0	2 50 54·700	+298·33	+ 0·32	+ 0·13	− 5 38 5·47	+1472·5	−15·1	− 1·6	6	29·23

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 160. G 5 + A 5.
* 174. $6^m.3$ to $7^m.8$.
* 178. $6^m.4$ to $7^m.7$

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″			
181	BD + 14°, 492....	7·70 A 0	2 51 31·874	+330·64	+ 0·74	− 0·17	+14 24 13·45	+1468·8	−16·7	− 2·4	5 7	30·49	30·02
182	Br. 410.....	6·08 F 8	2 52 12·890	+320·23	+ 0·58	+ 0·45	+ 8 4 50·82	+1464·7	−16·2	− 8·4	4 5	30·58	30·05
183	η Erid.....	4·05 K 0	2 52 45·710	+292·47	+ 0·26	+ 0·53	− 9 11 45·65	+1461·4	−14·9	−21·3	18 25	29·00	29·39
184	BD + 3°, 410.....	6·31 M 0	2 53 8·638	+314·01	+ 0·50	+ 0·05	+ 4 11 56·24	+1459·1	−16·0	+ 2·5	5 4	31·77	31·77
185	Br. 412.....	5·85 F 0	2 53 47·391	+341·40	+ 0·90	+ 1·65	+20 22 8·41	+1455·3	−17·4	− 3·2	5 4	28·84	29·61
186	π Pers.....	4·62 A 2	2 53 57·405	+382·73	+ 1·73	+ 0·27	+39 21 49·15	+1454·3	−19·5	− 3·9	4 5	31·60	31·46
187	CD − 29°, 1106...	6·19 G 5	2 55 54·883	+255·41	+ 0·03	+ 0·12	−29 12 16·37	+1442·4	−13·2	− 4·0	6 4	30·78	31·69
188	α Ceti.....	2·82 M 0	2 58 21·383	+313·51	+ 0·49	− 0·06	+ 3 47 46·84	+1427·5	−16·3	− 7·4	5 9	27·65	28·67
189	BD − 18°, 516....	7·40 F 0	2 58 35·717	+275·85	+ 0·14	− 0·22	−18 30 7·16	+1426·0	−14·4	− 2·8	7 5	32·47	32·27
190	γ Pers.....	3·08 *	2 59 21·065	+433·30	+ 2·97	+ 0·03	+53 12 50·61	+1421·4	−22·6	− 0·3	4	31·62	
191	β Pers.....	* B 8	3 3 16·842	+389·62	+ 1·77	+ 0·05	+40 40 4·85	+1396·9	−20·7	− 0·1	5 6	26·08	26·09
192	BD − 2°, 554.....	7·10 G 5	3 3 24·819	+303·78	+ 0·38	− 0·15	− 2 5 26·96	+1396·1	−16·2	− 2·8	8	31·37	
193	BD − 14°, 604....	7·16 G 0	3 3 45·947	+283·26	+ 0·20	+ 0·09	−14 2 40·89	+1393·9	−15·1	−26·1	4	30·24	
194	Br. 440.....	6·48 K 5	3 4 5·789	+339·47	+ 0·83	+ 0·34	+18 30 29·83	+1391·8	−18·1	− 1·5	5 4	32·09	31·88
195	Br. 441.....	5·60 B 9	3 5 5·632	+360·35	+ 1·17	+ 0·15	+28 47 29·91	+1385·5	−19·3	− 1·3	4 3	29·30	29·47
196	BD 52°, 663.....	7·50 A 5	3 5 32·310	+435·01	+ 2·88	− 0·06	+52 51 33·65	+1382·7	−23·2	− 0·6	4 3	32·40	32·27
197	BD 31°, 553.....	7·38 K 0	3 6 15·367	+367·78	+ 1·30	+ 0·35	+31 56 33·68	+1378·2	−19·8	− 1·9	5	31·13	
198	Gr. 621.....	6·00 B 8	3 7 11·851	+395·28	+ 1·85	+ 0·27	+42 5 37·76	+1372·2	−21·3	− 1·2	6 9	30·06	29·54
199	BD 47°, 779.....	6·42 K 0	3 7 14·558	+413·40	+ 2·28	+ 0·73	+47 26 42·89	+1371·9	−22·3	− 7·7	4	32·47	
200	BD − 20°, 596....	7·58 G 5	3 7 17·825	+271·05	+ 0·13	+ 0·48	−20 23 41·04	+1371·5	−14·7	− 1·9	2	33·01	
201	δ Arie.....	4·54 K 0	3 7 20·160	+341·69	+ 0·85	+ 1·08	+19 26 38·89	+1371·3	−18·5	− 0·7	11 30	29·04	29·24
202	Pi 3h, 6.....	5·84 *	3 8 27·375	+318·23	+ 0·54	− 0·05	+ 6 22 45·54	+1364·1	−17·3	+ 0·0	4	27·95	
203	α Forn.....	3·95 F 8	3 8 53·185	+252·28	+ 0·06	+ 2·52	−29 16 50·45	+1361·4	−13·8	+64·3	4	31·36	
204	Gr. 627.....	5·92 A 0	3 10 2·314	+458·22	+ 3·45	− 0·01	+56 51 44·90	+1354·0	−24·9	+ 0·6	5 6	26·26	26·51
205	BD + 38°, 690....	5·97 A 0	3 12 53·596	+388·01	+ 1·63	+ 0·23	+39 00 32·05	+1335·4	−21·4	− 1·4	7 8	27·26	27·12
206	BD + 12°, 460....	7·64 B 8	3 14 7·559	+329·57	+ 0·66	+ 0·01	+12 33 1·63	+1327·4	−18·3	+ 0·3	8 8	26·31	26·57
207	Br. 402.....	5·78 K 0	3 14 15·652	+1377·06	+84·20	+ 5·22	+84 38 59·12	+1326·5	−75·5	−12·8	9 11	30·08	29·86
208	BD − 19°, 651....	5·83 F 0	3 15 15·626	+272·98	+ 0·16	+ 0·96	−18 49 52·24	+1319·9	−15·3	− 4·9	7 9	28·33	27·47
209	Pi 3h, 27.....	5·55 K 2	3 18 8·551	+518·72	+ 5·16	− 0·01	+64 19 10·72	+1300·8	−29·0	+ 0·8	14 15	29·12	29·37
210	α Pers.....	1·90 F 5	3 18 57·481	+427·08	+ 2·41	+ 0·26	+49 35 44·36	+1295·4	−24·0	− 2·4	4	31·86	
211	CD − 26°, 1257...	6·26 A 0	3 19 2·780	+257·85	+ 0·11	+ 0·14	−25 51 19·21	+1294·8	−14·6	+ 0·8	4	31·95	
212	o Taur.....	3·80 G 5	3 20 46·412	+323·11	+ 0·57	− 0·44	+ 8 45 57·17	+1283·3	−18·4	− 7·5	22 48	28·89	29·25
213	BD − 4°, 586.....	7·41 G 5	3 21 25·142	+298·74	+ 0·34	+ 0·30	− 4 44 35·28	+1278·9	−17·0	+ 6·1	5 6	31·77	29·48
214	BD + 19°, 537....	7·0 A 3	3 23 41·756	+345·46	+ 0·84	+ 0·07	+20 12 15·15	+1263·5	−19·8	− 0·3	6	26·45	
215	BD + 29°, 566....	7·06 B 3	3 24 10·276	+367·56	+ 1·16	− 0·13	+30 6 58·73	+1260·3	−21·1	− 0·5	7 10	28·90	27·86
216	BD − 11°, 667....	5·85 K 0	3 24 26·255	+286·03	+ 0·25	+ 0·01	−11 32 43·14	+1258·5	−16·5	− 4·6	4	31·39	
217	CD − 23°, 1412...	6·84 F 5	3 26 18·627	+261·25	+ 0·13	+ 0·64	−23 44 0·73	+1245·7	−15·2	+ 3·5	4 3	32·44	32·29
218	5 Taur.....	4·28 K 0	3 26 43·702	+330·87	+ 0·64	+ 0·15	+12 40 50·93	+1242·8	−19·2	+ 0·0	22 47	29·33	29·86
219	BD + 34°, 674....	5·80 B 3	3 27 53·054	+381·56	+ 1·36	− 0·03	+35 12 28·79	+1234·9	−22·2	+ 0·1	5	28·27	
220	Br. 489.....	5·64 B 8	3 28 32·226	+324·22	+ 0·57	+ 0·22	+ 9 7 15·20	+1230·4	−18·9	− 4·2	4 6	29·36	28·71
221	ε Erid.....	3·81 K 0	3 29 23·421	+289·17	+ 0·27	− 6·59	− 9 42 39·82	+1224·4	−16·9	+ 2·0	21 37	29·40	29·78
222	τ^5 Erid.....	4·32 B 8	3 30 28·429	+264·63	+ 0·15	+ 0·32	−21 53 0·48	+1217·0	−15·6	− 2·2	4	31·01	
223	Br. 494.....	6·69 A 0	3 32 33·085	+352·58	+ 0·89	− 0·08	+22 57 50·90	+1202·5	−20·8	− 2·2	5 6	28·05	27·73
224	Br. 498.....	5·32 A 0	3 32 52·292	+273·09	+ 0·19	+ 0·16	−17 42 52·24	+1200·2	−16·2	− 0·8	4 5	30·48	30·15
225	Br. 496.....	6·12 G 0	3 32 56·220	+307·92	+ 0·41	− 0·17	+ 0 20 37·99	+1199·8	−18·2	−16·0	9 9	28·35	29·11

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 190. F 5 + A 3.
* 191. 2^m to $3^m.5$.
* 202. G 5 + A 5.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
226	BD + 13°, 579....	6·89 G 5	3 35 6·482	+333·46	+ 0·65	+ 0·09	+13 38 59·68	+1184·5	−19·9	− 9·0	4 5	25·98 25·57
227	Br. 502.....	6·00 G 5	3 35 18·823	+296·20	+ 0·32	− 0·09	− 5 51 56·67	+1183·0	−17·7	−20·1	6 7	29·96 29·41
228	BD + 40°, 813....	7·08 F 2	3 35 54·522	+401·05	+ 1·61	− 0·30	+40 56 42·85	+1178·8	−23·9	+ 8·1	4	28·14
229	δ Pers.....	3·10 B 5	3 37 34·552	+426·05	+ 2·06	+ 0·30	+47 32 57·09	+1167·0	−25·5	− 3·5	7	28·17
230	Pi 3h, 102.....	5·84 F 2	3 38 53·712	+563·89	+ 5·76	+ 1·68	+66 58 4·72	+1157·6	−33·8	−10·8	7 9	29·69 29·63
231	BD + 45°, 804....	6·09 A 5	3 39 24·891	+419·89	+ 1·91	− 0·04	+45 51 49·92	+1153·9	−25·3	− 3·7	4	32·00
232	δ Erid.....	3·72 K 0	3 39 39·140	+287·97	+ 0·27	− 0·63	−10 0 55·19	+1152·2	−17·4	+74·4	5 7	30·85 28·72
233	BD + 36°, 742....	5·57 A 2	3 39 39·800	+387·39	+ 1·34	+ 0·40	+36 13 28·06	+1152·1	−23·3	− 3·5	5 7	31·95 31·99
234	Pi 3h, 138.....	5·70 A 0	3 39 58·779	+286·55	+ 0·26	− 0·10	−10 43 20·23	+1149·9	−17·4	− 1·4	5 4	32·93 32·94
235	BD + 54°, 707....	6·80 A 5	3 40 1·870	+462·64	+ 2·81	+ 0·17	+54 49 45·20	+1149·5	−27·9	− 3·1	5 6	33·89 33·75
236	BD + 27°, 556....	6·71 F 0	3 40 3·260	+364·67	+ 1·00	− 0·22	+27 39 46·24	+1149·3	−22·0	− 7·3	2	33·06
237	CD − 26°, 1423...	6·92 A 3	3 42 23·262	+253·15	+ 0·14	− 0·16	−26 8 55·74	+1132·5	−15·5	+ 0·7	4	32·09
238	Gr. 642.....	5·84 F 5	3 42 25·982	+2066·21	+167·50	+16·66	+86 24 45·84	+1132·3	−124·5	− 7·0	176 194	29·49 29·02
239	η Taur.....	2·96 B 5	3 43 1·307	+356·17	+ 0·87	+ 0·17	+23 52 27·96	+1128·0	−21·7	− 4·4	6 7	32·47 32·54
240	τ^6 Erid.....	4·33 F 8	3 43 37·128	+259·23	+ 0·16	− 1·13	−23 28 17·79	+1123·6	−15·9	−52·4	4	32·97
241	BD − 0°, 602.....	6·10 K 0	3 44 47·900	+307·28	+ 0·39	+ 0·39	− 0 0 4·85	+1115·1	−18·8	− 0·4	7 6	29·80 30·78
242	BD − 21°, 703....	6·06 K 0	3 45 17·509	+264·30	+ 0·17	− 0·10	−21 7 54·68	+1111·5	−16·3	− 2·1	3 4	32·97 32·98
243	BD + 57°, 752....	5·79 A 0	3 47 37·224	+484·74	+ 3·14	+ 1·04	+57 45 13·15	+1094·5	−29·8	− 9·7	5	29·31
244	Br. 535.....	5·62 B 9	3 48 0·114	+319·67	+ 0·48	+ 0·07	+ 6 18 38·18	+1091·7	−19·8	− 0·4	5	25·80
245	Pi 3h, 187.....	5·96 F 0	3 48 52·487	+341·85	+ 0·69	+ 1·03	+17 6 17·12	+1085·3	−21·2	− 2·8	5 7	25·50 26·44
246	ζ Pers.....	2,91 B 1	3 49 24·674	+376·67	+ 1·09	+ 0·08	+31 39 44·35	+1081·3	−23·3	− 1·1	5	27·69
247	BD − 7°, 695.....	6·55 B 9	3 49 27·827	+293·75	+ 0·30	+ 0·03	− 6 51 21·91	+1081·0	−18·3	+ 0·2	4	31·95
248	BD −18°, 691.....	6·37 F 2	3 49 50·808	+269·24	+ 0·19	+ 0·03	−18 39 23·11	+1078·1	−16·8	+ 1·3	4 5	30·76 30·75
249	BD + 30°, 591....	* B 0	3 50 41·405	+374·66	+ 1·06	− 0·07	+30 49 34·25	+1071·9	−23·3	− 0·7	5 6	29·79 30·50
250	BD + 2°, 628.....	7·40 K 0	3 52 42·573	+312·91	+ 0·42	+ 0·22	+ 2 50 26·28	+1056·9	−19·6	+ 0·0	6 7	30·82 30·99
251	ε Pers.....	2·96 B 1	3 52 48·848	+401·89	+ 1·42	+ 0·20	+39 47 41·13	+1056·2	−25·1	− 2·8	5 4	30·50 30·41
252	BD + 24°, 599....	6·38 K 0	3 52 57·065	+358·45	+ 0·84	+ 0·03	+24 14 45·28	+1055·2	−22·4	− 1·1	5	28·72
253	γ Erid.....	3·19 K 5	3 54 31·711	+279·42	+ 0·23	+ 0·44	−13 43 15·35	+1043·4	−17·6	−10·9	16 24	29·66 28·99
254	BD + 13°, 621....	7·33 G 5	3 55 7·916	+335·27	+ 0·60	− 0·02	+13 45 46·96	+1038·9	−21·1	− 6·2	5 5	31·80 32·43
255	λ Taur.....	* B 3	3 56 31·302	+332·25	+ 0·57	− 0·04	+12 16 46·64	+1028·5	−21·0	− 1·0	16 28	29·35 30·44
256	BD + 73°, 210....	6·72 K 0	3 58 17·090	+703·82	+ 9·61	+ 0·66	+73 47 49·50	+1015·2	−44·4	− 6·6	9 9	30·71 30·99
257	ν Taur.....	3·94 A 0	3 59 9·809	+318·97	+ 0·45	+ 0·04	+ 5 46 56·48	+1008·6	−20·3	− 0·2	30 53	29·55 29·52
258	BD + 61°, 669....	6·75 B 2	3 59 33·002	+523·75	+ 3·71	− 0·06	+61 53 52·04	+1005·6	−33·2	+ 0·2	8 10	31·46 31·09
259	BD − 13°, 806....	5·67 G 5	4 0 52·098	+280·51	+ 0·24	+ 0·06	−12 59 50·43	+ 995·7	−18·0	+ 1·6	4 7	32·03 32·18
260	BD + 42°, 896....	7·12 K 0	4 2 48·525	+415·88	+ 1·51	+ 0·77	+42 58 51·72	+ 980·9	−26·6	− 9·7	2 3	31·41 31·24
261	BD + 42°, 897....	6·67 B 8	4 3 0·093	+415·97	+ 1·51	+ 0·07	+42 59 29·91	+ 979·4	−26·7	− 2·0	4	26·92
262	Br. 561.....	5·59 F 8	4 3 36·288	+398·00	+ 1·25	+ 1·42	+37 50 41·73	+ 974·8	−25·6	−20·0	6	26·53
263	BD − 22°, 754....	6·58 A 3	4 3 43·165	+259·63	+ 0·17	+ 0·05	−22 11 39·02	+ 973·9	−16·7	− 1·2	6 4	28·80 29·96
264	Pi 3h, 362.....	6·80 A 0	4 6 4·222	+299·54	+ 0·32	+ 0·04	− 3 46 11·80	+ 955·9	−19·4	+ 0·1	5 3	25·98 25·91
265	Br. 566.....	5·71 F 0	4 7 20·573	+318·27	+ 0·43	+ 1·00	+ 5 19 44·82	+ 946·1	−20·7	+ 1·1	6	26·50
266	BD + 48°, 1059...	7·28 G 5	4 8 8·041	+442·59	+ 1·84	+ 0·15	+48 54 10·28	+ 940·0	−28·7	− 0·1	3 4	28·96 29·48
267	o^1 Erid.....	4·14 F 2	4 8 12·140	+292·72	+ 0·29	+ 0·06	− 7 1 55·07	+ 939·5	−19·0	+ 8·7	12 31	31·20 30·64
268	BD − 17°, 816....	6·58 K 0	4 8 37·399	+270·10	+ 0·20	+ 0·02	−17 27 58·00	+ 936·2	−17·6	− 4·0	3 4	31·66 31·70
269	Gr. 766.....	5·39 B 3	4 10 38·838	+1370·62	+48·78	− 0·56	+83 37 48·43	+ 920·6	−88·9	+ 1·3	9	31·61 31·89
270	Pi 4h, 7.....	5·12 A 2	4 10 51·408	+467·34	+ 2·21	− 0·10	+53 25 30·56	+ 918·9	−30·5	− 0·1	4	28·36

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 249. $6^m.0$ to $6^m.6$.
* 255. $3^m.8$ to $4^m.1$.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″				
271	Gr. 750	6·70 F 8	4 12 24·251	+1774·52	+87·78	+ 1·51	+85 21 23·29	+ 906·9	−115·5	+ 2·8	143	161	29·26	28·81
272	Br. 576	5·56 A 5	4 13 56·674	+354·14	+ 0·68	+ 0·70	+21 23 49·71	+ 894·8	−23·3	− 3·5	3	4	29·90	30·19
273	γ Taur	3·86 K 0	4 15 31·315	+340·44	+ 0·56	+ 0·82	+15 26 52·22	+ 882·5	−22·5	− 2·4	4	7	28·25	27·77
274	Br. 586	5·27 F 0	4 16 20·952	+339·30	+ 0·55	+ 0·76	+14 55 1·19	+ 876·0	−22·4	− 2·3	4	6	32·27	31·70
275	BD − 16°, 838	6·65 B 9	4 16 45·301	+271·38	+ 0·21	+ 0·08	−16 36 57·49	+ 872·8	−18·0	− 0·5	3		33·10	
276	BD − 7°, 798	5·72 B 8	4 17 4·456	+290·85	+ 0·27	+ 0·02	− 7 46 15·34	+ 870·2	−19·3	− 0·4	3	4	32·00	32·24
277	Pi 4h, 68	5·88 F 0	4 18 24·435	+248·65	+ 0·16	+ 0·33	−25 54 13·63	+ 859·7	−16·6	− 4·9	6	8	28·51	29·02
278	δ Taur	3·93 K 0	4 18 36·365	+345·05	+ 0·59	+ 0·77	+17 22 4·06	+ 858·2	−22·9	− 3·1	12	29	28·46	28·10
279	ε Erid	5·23 A 2	4 19 56·642	+298·99	+ 0·30	− 0·33	− 3 55 3·44	+ 847·6	−19·9	− 5·7	3	4	27·02	28·04
280	BD + 57°, 800	6·23 A 0	4 20 46·520	+497·07	+ 2·49	+ 0·18	+57 24 56·00	+ 841·0	−33·1	− 1·8	8	6	32·38	32·54
281	BD + 69°, 258	7·02 K 0	4 21 58·060	+627·58	+ 5·30	+ 0·25	+69 12 44·62	+ 831·5	−41·8	− 2·6	8		30·18	
282	BD + 8°, 687	5·99 B 5	4 22 16·808	+325·29	+ 0·44	+ 0·02	+ 8 25 16·82	+ 829·0	−21·8	− 1·4	4	7	30·08	29·08
283	BD + 1°, 753	6·37 K 0	4 23 6·618	+311·35	+ 0·36	+ 0·44	+ 1 54 44·63	+ 822·4	−20·9	− 4·4	5		26·20	
284	ε Taur	3·63 K 0	4 24 14·038	+349·37	+ 0·59	+ 0·79	+19 0 55·61	+ 813·4	−23·4	− 3·8	20	44	29·10	29·28
285	BD − 21°, 878	6·73 F 5	4 24 41·262	+258·71	+ 0·18	− 0·09	−21 40 7·93	+ 809·8	−17·4	− 3·5	6	5	32·87	33·03
286	BD + 27°, 661	6·61 A 0	4 24 41·657	+370·21	+ 0·76	+ 0·14	+27 14 23·76	+ 809·7	−24·9	− 2·2	5		30·96	
287	BD − 13°, 893	5·50 B 3	4 25 37·850	+278·53	+ 0·22	+ 0·02	−13 12 44·65	+ 802·2	−18·8	− 0·4	4	5	31·56	31·85
288	Br. 620	5·49 A 5	4 26 21·949	+341·36	+ 0·52	+ 0·73	+15 31 47·92	+ 796·3	−23·0	− 2·4	4	5	30·71	29·39
289	BD + 36°, 907	6·82 F 5	4 27 16·839	+399·46	+ 1·01	+ 0·23	+36 53 0·04	+ 789·0	−26·9	− 1·4	10		26·04	
290	α Taur	1·06 K 5	4 31 36·849	+343·63	+ 0·52	+ 0·48	+16 21 34·39	+ 754·0	−23·4	−19·0	24	46	29·08	29·37
291	Br. 640	5·32 B 5	4 33 21·582	+309·12	+ 0·32	− 0·03	+ 0 50 51·10	+ 739·8	−21·1	− 0·3	4	4	27·92	27·71
292	Br. 642	5·31 A 5	4 33 49·542	+301·59	+ 0·29	+ 0·28	− 2 37 20·46	+ 736·1	−20·6	− 5·8	5	7	29·99	28·85
293	BD + 20°, 785	5·73 B 9	4 33 50·104	+353·84	+ 0·57	− 0·10	+20 32 6·91	+ 736·0	−24·1	− 0·7	22	5	28·97	30·99
294	BD − 18°, 883	7·73 K 0	4 34 43·829	+266·92	+ 0·19	− 0·09	−17 57 52·87	+ 728·7	−18·3	− 4·4	5	6	29·80	30·35
295	BD + 76°, 174	6·51 F 5	4 35 34·504	+825·46	+ 9·97	+ 2·13	+76 28 19·77	+ 721·8	−56·3	−13·1	8	9	29·41	29·30
296	Br. 646	5·37 B 9	4 35 52·658	+333·91	+ 0·44	+ 0·00	+12 3 5·74	+ 719·3	−22·9	− 0·9	6	10	26·38	26·26
297	Br. 644	5·25 A 0	4 37 34·723	+424·84	+ 1·15	+ 0·39	+43 13 25·38	+ 705·4	−29·1	− 5·1	7	10	28·41	28·18
298	Gr. 866	5·77 B 8	4 37 39·135	+455·48	+ 1·50	− 0·01	+49 49 55·84	+ 704·8	−31·2	− 2·2	4	5	28·46	28·77
299	τ Taur	4·33 B 5	4 37 44·399	+359·91	+ 0·59	+ 0·03	+22 48 51·87	+ 704·1	−24·7	− 1·6	4	5	27·14	27·93
300	Pi 4h, 161	6·45 A 3	4 38 57·080	+387·84	+ 0·79	− 0·24	+32 43 33·13	+ 694·2	−26·7	− 4·4	4	5	27·78	27·83
301	Br. 656	5·87 B 5	4 40 28·992	+288·18	+ 0·24	+ 0·01	− 8 38 33·08	+ 681·6	−19·9	− 0·2	6		27·65	
302	CD − 27°, 1869	7·04 K 2	4 41 14·125	+241·18	+ 0·16	+ 0·19	−27 42 55·58	+ 675·4	−16·7	− 1·8	4		29·59	
303	μ Erid	4·18 B 5	4 41 45·018	+299·82	+ 0·27	+ 0·10	− 3 23 27·21	+ 671·2	−20·7	− 1·1	17	46	29·05	29·51
304	Pi 4h, 186	6·03 K 2	4 41 50·517	+257·88	+ 0·18	+ 0·13	−21 25 12·01	+ 670·4	−17·9	− 2·2	8	9	33·03	32·90
305	Br. 651	6·34 F 0	4 41 57·492	+490·35	+ 1·85	+ 0·94	+55 28 13·22	+ 669·5	−33·8	−10·2	5		28·12	
306	BD + 29°, 741	7·36 B 9	4 43 37·893	+379·14	+ 0·69	+ 0·09	+29 38 27·47	+ 655·6	−26·3	− 3·5	5	7	27·42	27·04
307	Gr. 856	5·32 K 0	4 46 14·730	+114·40	+18·92	− 0·02	+81 4 24·95	+ 634·0	−77·2	+ 2·9	14	17	28·83	28·54
308	BD − 14°, 970	6·30 F 2	4 46 15·723	+275·92	+ 0·20	− 0·79	−13 53 42·71	+ 633·8	−19·2	−16·3	10	10	26·50	25·99
309	BD + 61°, 739	6·63 A 2	4 46 53·350	+539·60	+ 2·39	+ 0·34	+61 21 27·79	+ 628·6	−37·5	− 3·9	10	11	28·04	27·68
310	π^5 Orio	3·87 B 3	4 50 20·536	+312·44	+ 0·30	− 0·01	+ 2 19 8·77	+ 599·9	−21·9	+ 0·0	12	14	28·86	28·43
311	Pi 4h, 236	5·54 K 0	4 50 44·285	+324·44	+ 0·34	− 0·13	+ 7 39 31·88	+ 596·6	−22·7	− 3·2	4	5	29·94	30·16
312	BD − 16°, 992	5·82 K 0	4 51 56·440	+269·34	+ 0·19	+ 0·05	−16 32 15·86	+ 586·5	−18·9	+ 4·8	4		31·84	
313	ι Auri	2·90 K 2	4 52 6·296	+390·44	+ 0·69	+ 0·06	+33 2 55·98	+ 585·2	−27·3	− 1·9	6	7	33·26	33·24
314	Br. 689	5·46 B 9	4 52 42·420	+295·44	+ 0·24	− 0·05	− 5 17 20·79	+ 580·1	−20·7	− 0·5	5	5	32·66	
315	Br. 684	5·99 K 0	4 53 15·438	+363·82	+ 0·52	+ 0·09	+23 49 58·67	+ 575·5	−25·5	− 0·8	3		32·44	

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
316	Br. 683	4·99 A 0	4 54 9·716	+406·61	+ 0·79	+ 0·38	+37 46 41·72	+ 567·9	−28·5	−10·2	3	33·08
317	Br. 695	4·73 K 0	4 54 39·555	+310·86	+ 0·28	− 0·01	+ 1 36 0·71	+ 563·8	−21·9	− 0·2	2 3	31·05 30·05
318	BD + 14°, 796	5·98 B 8	4 54 43·875	+340·28	+ 0·39	+ 0·05	+14 25 46·58	+ 563·2	−23·9	− 1·9	4	32·09
319	ε Auri	* F 5	4 56 34·948	+430·18	+ 0·94	+ 0·03	+43 42 50·47	+ 547·6	−30·3	− 0·7	4 3	27·76 27·00
320	Gr. 915	6·20 A 0	4 58 2·681	+420·55	+ 0·85	+ 0·05	+41 20 5·09	+ 535·3	−29·7	− 0·5	7 8	28·21 28·32
321	ι Taur	4·70 A 5	4 58 36·551	+358·00	+ 0·45	+ 0·48	+21 29 3·18	+ 530·5	−25·3	− 4·3	6 8	26·18 26·65
322	Br. 691	5·31 B 3	4 59 36·781	+520·90	+ 1·75	+ 0·00	+58 52 10·06	+ 522·1	−36·8	− 0·7	5 7	28·79 28·87
323	CD − 24°, 2795	5·55 A 2	5 0 46·677	+248·43	+ 0·16	+ 0·17	−24 29 28·35	+ 512·2	−17·6	− 2·8	9	28·81
324	BD − 3°, 998	5·98 B 5	5 1 9·216	+300·18	+ 0·23	+ 0·00	− 3 8 32·12	+ 509·0	−21·3	+ 0·2	5 7	31·17 30·00
325	BD + 33°, 953	6·94 B 8	5 1 12·488	+393·87	+ 0·63	+ 0·04	+33 49 2·98	+ 508·6	−27·9	− 0·6	8 8	29·27 28·65
326	ε Lepo	3·29 K 5	5 2 17·076	+253·75	+ 0·16	+ 0·18	−22 28 15·19	+ 499·5	−18·0	− 7·3	9 10	31·70 31·83
327	Pi 4h, 254	5·38 A 0	5 2 53·601	+754·58	+ 5·13	+ 0·22	+73 51 9·89	+ 494·3	−53·4	− 3·3	10 11	28·85 28·82
328	BD − 12°, 1076	6·14 F 8	5 3 55·446	+278·33	+ 0·19	+ 0·95	−12 35 13·71	+ 485·6	−19·8	− 7·8	6	29·86
329	β Erid	2·92 A 3	5 4 9·632	+295·52	+ 0·22	− 0·62	− 5 10 56·36	+ 483·6	−21·0	− 7·9	12 34	27·61 28·59
330	Br. 710	6·55 G 5	5 4 24·678	+353·89	+ 0·40	+ 0·06	+19 45 49·79	+ 481·4	−25·1	− 1·5	8 9	32·34 32·20
331	BD + 85°, 74	6·54 A 5	5 5 0·164	+2102·58	+62·12	+ 2·53	+85 51 52·37	+ 476·4	−149·0	− 7·6	9 11	29·93 29·78
332	BD + 27°, 732	5·97 A 3	5 5 2·359	+376·12	+ 0·50	+ 0·47	+27 56 11·71	+ 476·1	−26·7	− 7·0	6 8	30·76 30·70
333	Pi 4h, 294	5·59 F 5	5 5 7·570	+445·87	+ 0·93	+ 0·59	+46 52 15·18	+ 475·4	−31·7	−15·0	4	31·52
334	Br. 716	5·42 A 2	5 5 11·906	+329·55	+ 0·31	+ 0·44	+ 9 44 4·86	+ 474·7	−23·4	− 0·4	4	26·93
335	BD + 67°, 371	7·12 A 0	5 6 21·410	+619·45	+ 2·69	+ 0·09	+67 23 34·93	+ 464·9	−44·0	− 6·6	7 8	29·73 29·61
336	BD + 67°, 373	7·58 F 0	5 7 1·014	+617·81	+ 2·63	.....	+67 16 18·77	+ 459·3	−43·9	.....	2 3	28·48 28·34
337	Br. 729	6·16 A 0	5 9 56·792	+288·40	+ 0·19	+ 0·01	− 8 14 6·48	+ 434·3	−20·6	+ 0·2	5 6	26·64 26·39
338	β Orio	0·34 B 8	5 10 55·916	+288·26	+ 0·19	+ 0·01	− 8 17 13·55	+ 425·9	−20·6	+ 0·0	26 47	29·64 29·70
339	α Auri	0·21 G 0	5 11 8·692	+442·17	+ 0·81	+ 0·81	+45 55 23·18	+ 424·1	−31·6	−42·7	3 5	27·99 28·62
340	τ Orio	3·68 B 5	5 13 57·772	+291·38	+ 0·19	− 0·10	− 6 55 27·38	+ 399·9	−20·9	− 0·5	26 45	29·97 30·27
341	Br. 741	5·14 K 0	5 14 46·038	+360·28	+ 0·37	+ 0·10	+27 1 12·72	+ 393·0	−25·8	− 8·3	7	26·99
342	BD + 54°, 882	6·75 G 5	5 15 10·168	+488·87	+ 1·06	− 0·01	+54 10 35·68	+ 389·6	−35·0	+ 3·0	5	31·27
343	Br. 744	5·45 F 5	5 15 16·334	+313·05	+ 0·23	− 0·11	+ 2 31 9·16	+ 388·7	−22·5	− 4·6	5 6	29·40 28·52
344	BD − 18°, 1051	5·93 G 0	5 15 30·348	+264·15	+ 0·16	+ 2·68	−18 12 31·52	+ 386·7	−19·0	+ 6·3	3	31·81
345	BD + 10°, 758	7·44 A 0	5 16 15·030	+332·35	+ 0·27	− 0·08	+10 48 55·97	+ 380·3	−23·9	− 2·7	5	29·83
346	BD + 8°, 933	5·71 B 2	5 17 38·443	+326·57	+ 0·25	+ 0·01	+ 8 21 20·27	+ 368·4	−23·5	+ 0·2	10 11	28·72 28·67
347	BD + 85°, 78	6·55 A 0	5 18 14·337	+2021·30	+42·75	− 0·83	+85 36 55·57	+ 363·3	−145·0	+ 0·4	9 12	29·16 29·92
348	BD + 70°, 351	7·04 B 9	5 18 21·789	+671·57	+ 2·65	+ 0·38	+70 9 39·24	+ 362·2	−48·2	− 2·5	12 14	27·30 27·10
349	σ Auri	5·22 K 5	5 19 33·105	+407·56	+ 0·51	+ 0·03	+37 19 0·34	+ 351·9	−29·3	− 1·0	8	28·56 28·69
350	CD − 26°, 2185	6·44 F 5	5 20 11·073	+240·87	+ 0·14	+ 0·18	−26 46 30·43	+ 346·5	−17·4	+ 0·9	5	31·71
351	γ Orio	1·70 B 2	5 21 6·397	+321·78	+ 0·23	− 0·04	+ 6 16 58·90	+ 338·5	−23·2	− 1·4	14 40	28·32 28·80
352	β Taur	1·78 B 8	5 21 32·905	+378·95	+ 0·38	+ 0·23	+28 32 43·79	+ 334·7	−27·3	−17·5	4	30·02
353	Br. 767	5·31 B 3	5 22 47·438	+349·87	+ 0·29	+ 0·07	+17 53 56·63	+ 324·0	−25·2	− 2·9	5 8	27·63 27·40
354	Pi 5h, 102	6·37 F 5	5 23 35·055	+279·32	+ 0·16	+ 0·08	−11 57 46·67	+ 317·2	−20·2	− 4·8	6 7	27·33 26·87
355	BD − 21°, 1174	6·14 K 0	5 24 24·719	+255·44	+ 0·14	+ 0·09	−21 26 16·30	+ 310·0	−18·5	+ 3·8	5 6	30·93 30·80
356	BD − 0°, 960	6·58 B 9	5 24 35·215	+307·19	+ 0·19	− 0·09	− 0 2 25·01	+ 308·5	−22·2	− 1·6	8 9	33·06 33·29
357	BD + 29°, 909	6·24 F 5	5 24 54·597	+380·87	+ 0·36	+ 0·20	+29 7 41·31	+ 305·7	−27·5	− 5·6	6	30·90
358	BD + 41°, 1206	6·09 K 0	5 25 30·442	+423·78	+ 0·51	− 0·14	+41 24 17·70	+ 300·5	−30·6	− 4·2	5 4	27·85 27·81
359	δ Orio	2·48 B 0	5 28 10·388	+306·46	+ 0·18	+ 0·01	− 0 21 12·13	+ 277·5	−22·2	− 0·1	18 58	29·22 29·14
360	α Lepo	2·69 F 0	5 29 25·221	+264·57	+ 0·14	+ 0·02	−17 52 29·75	+ 266·7	−19·2	+ 0·5	5	30·69

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.)
T in centuries from 1925·0, T′ in centuries from epoch.

* 319. $3^m.1$ to $3^m.8$.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
361	Br. 770	6·03 B 9	5 29 59·126	+580·23	+ 1·23	+ 0·12	+64 6 28·61	+ 261·8	−42·0	− 6·8	7 8	28·88 29·08
362	Br. 793	5·32 A 2	5 30 19·839	+315·89	+ 0·19	− 0·21	+ 3 43 0·59	+ 258·8	−22·9	− 1·8	7 8	27·33 27·54
363	ε Orio	1·75 B 0	5 32 24·381	+304·39	+ 0·17	+ 0·00	− 1 14 55·07	+ 240·8	−22·1	+ 0·0	17 40	29·47 28·31
364	BD + 10°, 828	6·10 K 0	5 32 54·170	+333·05	+ 0·20	+ 0·32	+10 59 23·18	+ 236·4	−24·2	− 1·3	5 6	30·00 30·35
365	BD − 6°, 1255	5·62 B 3	5 32 55·792	+293·07	+ 0·16	− 0·04	− 6 6 37·72	+ 236·2	−21·3	− 1·1	4	29·88
366	ζ Taur	3·00 B 3	5 33 9·620	+358·49	+ 0·25	+ 0·04	+21 5 53·38	+ 234·2	−26·0	− 2·2	4	31·37
367	CD − 27°, 2395	6·75 K 2	5 35 7·618	+238·85	+ 0·13	− 0·02	−27 15 11·54	+ 217·1	−17·4	+ 0·4	4 3	29·52 29·69
368	BD + 24°, 909	7·04 F 2	5 35 16·115	+366·94	+ 0·25	+ 0·04	+24 11 1·47	+ 215·9	−26·6	+ 3·7	4	29·85
369	BD − 17°, 1199	6·22 B 9	5 35 57·818	+264·38	+ 0·13	+ 0·01	−17 53 24·24	+ 209·8	−19·2	+ 0·4	4	31·78
370	Br. 797	6·19 K 0	5 36 39·788	+508·47	+ 0·65	+ 0·21	+56 32 40·04	+ 203·8	−36·9	+ 3·0	4 5	32·82 32·47
371	Gr. 944	6·41 K 0	5 37 43·261	+1878·99	+19·05	+ 1·51	+85 9 46·91	+ 194·6	−136·3	+ 0·5	221 255	29·10 29·02
372	BD − 20°, 1171	6·44 G 0	5 41 14·582	+258·39	+ 0·13	− 0·11	−20 9 29·89	+ 163·9	−18·8	+ 4·6	4 6	31·06 29·74
373	Br. 830	5·91 B 8	5 42 26·572	+344·97	+ 0·18	+ 0·06	+15 47 40·13	+ 153·4	−25·1	− 0·7	4	29·06
374	BD + 29°, 997	7·21 F 8	5 42 37·438	+383·08	+ 0·22	− 0·02	+29 37 57·50	+ 151·8	−27·9	−11·4	4	32·11
375	BD + 9°, 954	5·89 G 5	5 42 44·965	+329·57	+ 0·16	− 0·23	+ 9 29 45·66	+ 150·7	−24·0	− 6·5	4	28·81
376	Br. 827	6·90 G 0	5 43 38·698	+417·19	+ 0·27	+ 0·03	+39 30 33·06	+ 142·9	−30·4	− 2·2	4 5	29·32 29·07
377	κ Orio	2·20 B 0	5 44 11·883	+284·50	+ 0·13	+ 0·03	− 9 41 42·08	+ 138·1	−20·7	− 0·2	15 29	28·68 27·80
378	BD − 4°, 1244	5·95 G 5	5 44 51·255	+297·69	+ 0·13	+ 0·47	− 4 6 51·91	+ 132·4	−21·7	−22·0	4 2	28·77 28·77
379	BD − 14°, 1251	5·57 G 5	5 46 11·931	+272·77	+ 0·12	− 0·18	−14 30 16·78	+ 120·6	−19·9	− 4·5	8 8	28·45 28·19
380	α Orio	* M 0	5 51 6·612	+324·61	+ 0·12	+ 0·18	+ 7 23 40·10	+ 77·7	−23·7	+ 0·7	21 43	28·98 28·64
381	BD + 11°, 975	6·08 G 5	5 52 37·969	+334·48	+ 0·12	+ 0·68	+11 30 44·92	+ 64·4	−24·4	− 5·4	5 7	29·68 29·08
382	β Auri	2·07 A 0	5 54 1·482	+440·59	+ 0·15	− 0·48	+44 56 30·09	+ 52·2	−32·1	− 0·4	5 8	30·44 28·38
383	BD − 18°, 1247	6·92 F 5	5 54 15·465	+263·71	+ 0·11	− 0·02	−18 3 45·54	+ 50·2	−19·2	− 0·5	2	30·02
384	Gr. 1030	6·52 K 5	5 54 48·669	+827·09	+ 0·57	+ 0·55	+75 35 9·82	+ 45·4	−60·3	− 1·6	7 8	30·25 30·74
385	Br. 870	5·25 A 0	5 54 58·106	+308·56	+ 0·11	− 0·10	+ 0 32 50·71	+ 44·0	−22·5	− 0·3	7	32·69
386	BD + 33°, 1209	6·80 A 2	5 55 18·433	+394·48	+ 0·12	+ 0·01	+33 7 59·16	+ 41·0	−28·8	− 0·5	4 5	33·86 34·12
387	Br. 874	5·10 A 5	5 55 30·535	+284·77	+ 0·11	+ 0·11	− 9 33 43·31	+ 39·3	−20·8	− 5·2	5 4	30·91 31·10
388	Br. 871	6·28 B 8	5 57 9·788	+362·36	+ 0·10	− 0·05	+22 24 0·86	+ 24·8	−26·4	− 2·2	4	32·11
389	Br. 868	6·13 G 5	5 57 53·488	+431·52	+ 0·10	+ 1·08	+42 54 54·95	+ 18·4	−31·5	−14·6	4	29·81
390	CD − 25°, 2865	5·90 A 0	5 58 10·148	+243·78	+ 0·11	− 0·04	−25 25 2·93	+ 16·0	−17·8	− 1·6	3	30·78
391	μ Orio	4·19 A 2	5 58 15·352	+330·00	+ 0·10	+ 0·11	+ 9 38 54·80	+ 15·3	−24·1	− 2·9	3 4	30·46 30·61
392	Br. 864	6·30 A 5	5 58 32·189	+475·74	+ 0·09	+ 0·06	+51 34 37·26	+ 12·8	−34·7	− 4·6	7	30·05
393	Pi 5h, 325	7·01 B 9	6 2 39·051	+374·46	+ 0·06	− 0·06	+26 41 28·59	− 23·2	−27·3	− 0·4	3	25·45
394	θ Leps	4·67 A 0	6 2 45·552	+271·66	+ 0·10	− 0·10	−14 55 37·63	− 24·1	−19·8	+ 1·8	5	29·72
395	BD − 3°, 1297	6·75 B 5	6 3 11·578	+299·50	+ 0·09	− 0·08	− 3 19 54·42	− 27·9	−21·8	− 0·3	5	29·72
396	ν Orio	4·40 B 2	6 3 17·295	+342·53	+ 0·07	+ 0·06	+14 46 43·83	− 28·8	−25·0	− 2·7	16 41	29·16 29·09
397	BD − 21°, 1353	6·12 M 3	6 3 47·080	+253·83	+ 0·10	+ 0·04	−21 48 8·70	− 33·1	−18·5	− 1·7	4	31·14
398	36 Caml	5·39 K 0	6 5 18·311	+603·65	− 0·21	+ 0·18	+65 44 8·11	− 46·4	−44·0	− 2·9	12 14	30·76 30·69
399	Br. 886	6·09 A 0	6 5 51·846	+459·49	− 0·04	+ 0·22	+48 43 41·31	− 51·3	−33·5	− 5·4	6 7	28·03 26·79
400	Br. 900	5·70 B 9	6 7 34·729	+355·39	+ 0·04	+ 0·04	+19 48 31·20	− 66·3	−25·9	− 1·2	7 10	25·92 25·68
401	η Gemi	* M 2	6 10 20·935	+362·66	+ 0·01	− 0·46	+22 31 47·91	− 90·5	−26·4	− 1·5	3 5	26·33 26·26
402	Br. 904	6·93 F 0	6 10 35·687	+404·88	− 0·04	− 0·50	+36 10 21·16	− 92·6	−29·5	+ 0·4	6 7	27·72 27·36
403	Br. 893	5·30 M 0	6 10 59·973	+553·54	− 0·33	+ 0·01	+61 32 30·44	− 96·2	−40·3	− 0·4	12 12	27·74 28·05
404	5 Mono	4·09 K 0	6 11 11·766	+292·66	+ 0·07	− 0·03	− 6 15 1·89	− 97·9	−21·3	− 1·8	14 42	30·14 29·68
405	BD + 1°, 1275	6·34 F 5	6 12 1·387	+310·06	+ 0·06	− 0·04	+ 1 11 37·93	− 105·1	−22·5	+ 3·4	7 8	27·57 27·64

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

*380. $0^m.1$ to $1^m.2$.
*401. $3^m.2$ to $4^m.2$.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
406	Br. 917	6·26 B 2	6 12 24·132	+366·04	− 0·00	+ 0·04	+23 46 3·60	− 108·4	−26·6	− 0·4	4	28·32
407	2 Lync	4·42 A 0	6 13 0·359	+529·68	− 0·34	− 0·06	+59 2 24·07	− 113·7	−38·5	+ 2·2	7 8	28·32 28·06
408	BD + 14°, 1235	5·98 A 0	6 13 49·387	+341·56	+ 0·02	− 0·12	+14 24 42·75	− 120·8	−24·8	− 0·1	5 6	29·12 27·94
409	BD − 16°, 1426	5·28 K 0	6 14 21·418	+267·05	+ 0·08	− 0·06	−16 47 11·69	− 125·5	−19·4	+ 0·8	8 10	28·84 28·01
410	7 Mono	5·13 B 3	6 16 5·965	+289·04	+ 0·06	− 0·05	− 7 47 25·25	− 140·7	−21·0	+ 0·0	4 4	28·04 27·04
411	BD + 30°, 1211	7·06 A 0	6 17 15·675	+384·21	− 0·07	+ 0·02	+30 0 0·87	− 150·8	−27·9	− 1·5	3 5	27·44 26·91
412	ζ C. Maj	3·10 B 3	6 17 25·981	+230·26	+ 0·09	+ 0·02	−30 1 44·59	− 152·3	−16·7	+ 0·2	5 4	27·93 27·44
413	CD − 29°, 3021	7·40 F 0	6 18 2·452	+231·50	+ 0·09	+ 0·31	−29 37 1·86	− 157·6	−16·8	− 7·2	4 4	29·85 32·10
414	μ Gemi	3·19 M 0	6 18 25·369	+362·60	− 0·04	+ 0·43	+22 33 12·25	− 161·0	−26·3	−11·4	5	28·93
415	Gr. 1004	6·57 G 5	6 19 8·398	+2653·20	−36·16	+ 2·11	+86 45 2·98	− 167·2	−192·7	−10·6	6 7	29·02 28·96
416	β C. Maj	1·99 B 1	6 19 23·742	+264·23	+ 0·08	− 0·03	−17 55 2·84	− 169·4	−19·2	− 0·1	8 7	33·27 33·57
417	BD + 70°, 401	5·99 A 2	6 19 41·550	+684·90	− 1·30	+ 0·09	+70 34 43·20	− 172·0	−49·7	+ 2·3	12	28·31
418	ε Mono	4·48 A 5	6 19 47·566	+318·07	+ 0·02	− 0·12	+ 4 37 56·60	− 172·9	−23·1	+ 0·8	14 40	28·78 28·99
419	BD + 8°, 1316	6·11 A 0	6 19 56·166	+328·19	+ 0·01	− 0·03	+ 8 55 31·41	− 174·1	−23·8	− 2·0	5 6	28·87 29·24
420	BD − 11°, 1478	5·39 K 0	6 20 40·309	+280·23	+ 0·06	− 0·38	−11 29 19·32	− 180·6	−20·3	− 4·1	6 5	30·09 29·92
421	Gr. 1156	7·14 G 5	6 21 1·367	+427·11	− 0·21	− 0·05	+42 0 9·93	− 183·6	−31·0	− 1·0	6 8	31·09 29·60
422	BD − 1°, 1242	5·73 A 0	6 22 51·640	+303·89	+ 0·03	− 0·02	− 1 27 42·10	− 199·6	−22·0	− 3·5	8	28·54
423	BD + 16°, 1159	6·33 G 5	6 24 8·908	+346·11	− 0·04	− 0·68	+16 17 13·59	− 210·8	−25·0	− 5·3	6 7	28·45 27·98
424	10 Mono	4·98 B 3	6 24 15·273	+296·32	+ 0·04	− 0·04	− 4 42 52·61	− 211·7	−21·4	+ 0·6	30 66	29·35 29·19
425	Pi 6h, 114	6·85 A 2	6 25 37·980	+378·67	− 0·13	− 0·01	+28 15 47·75	− 223·7	−27·4	− 1·5	7	26·39
426	BD − 22°, 1429	6·69 A 2	6 26 16·332	+252·18	+ 0·08	+ 0·11	−22 32 25·62	− 229·3	−18·2	+ 0·8	5	30·67
427	BD + 47°, 1310	7·14 K 5	6 27 12·464	+449·46	− 0·38	+ 0·28	+46 58 39·67	− 237·4	−32·5	− 1·4	5	27·55
428	Gr. 1173	7·2 A 3	6 27 57·630	+480·26	− 0·53	+ 0·12	+52 31 9·18	− 244·0	−34·7	− 8·0	7	25·91
429	BD 82°, 177	6·39 A 2	6 28 41·685	+1273·03	−10·09	+ 0·38	+82 10 58·60	− 250·3	−92·0	− 5·4	12 13	28·00 27·66
430	Pi 6h, 171	5·48 B 9	6 32 53·735	+295·37	+ 0·02	+ 0·00	− 5 8 51·76	− 286·7	−21·2	− 1·4	7	28·49
431	Br. 975	5·81 G 5	6 33 5·765	+262·78	+ 0·06	− 0·07	−18 35 49·74	− 288·5	−18·9	+ 1·6	5 5	29·47 28·49
432	γ Gemi	1·93 A 0	6 33 22·736	+346·36	− 0·09	+ 0·33	+16 27 52·54	− 290·9	−24·9	− 4·6	19 43	28·77 28·94
433	BD + 2°, 1315	6·42 K 0	6 33 45·197	+313·68	− 0·01	− 0·21	+ 2 46 11·67	− 294·2	−22·6	− 4·8	6 7	29·48 29·72
434	BD + 22°, 1416	6·28 K 0	6 34 34·538	+360·92	− 0·14	+ 0·06	+22 5 53·44	− 301·3	−25·9	− 2·9	4 6	29·10 27·77
435	BD + 11°, 1273	6·43 M 0	6 37 7·364	+333·09	− 0·07	− 0·01	+11 4 26·80	− 323·3	−23·9	+ 0·7	7 9	26·56 26·23
436	BD + 32°, 1378	6·87 G 5	6 37 51·368	+391·68	− 0·27	+ 0·07	+32 37 55·01	− 329·6	−28·1	− 1·7	4 6	26·29 25·92
437	ε Gemi	3·18 G 5	6 39 19·036	+369·26	− 0·20	+ 0·00	+25 12 24·42	− 342·2	−26·4	− 1·6	7 8	29·24 28·60
438	Br. 976	5·47 G 5	6 40 26·056	+511·80	− 1·01	+ 0·28	+57 14 56·25	− 351·8	−36·6	− 4·1	5	26·28
439	CD − 25°, 3546	6·78 G 5	6 40 50·147	+244·67	+ 0·07	− 0·26	−25 27 28·44	− 355·3	−17·5	− 0·4	7	31·53
440	ξ Gemi	3·40 F 5	6 41 4·733	+337·58	− 0·10	− 0·76	+12 58 39·42	− 357·4	−24·1	−19·5	18 44	28·50 28·67
441	Br. 984	5·28 K 0	6 41 56·590	+457·75	− 0·67	− 0·01	+48 52 13·75	− 364·8	−32·7	+ 0·3	4 5	29·53 28·65
442	Br. 991	5·84 B 3	6 42 26·924	+327·30	− 0·08	− 0·04	+ 8 40 4·73	− 369·2	−23·4	− 1·1	5 7	28·25 28·64
443	Br. 1001	6·00 B 8	6 43 48·645	+257·09	+ 0·06	− 0·09	−20 55 59·80	− 380·9	−18·3	+ 0·3	4	26·41
444	BD − 2°, 1776	5·65 A 0	6 45 29·707	+302·28	− 0·02	− 0·08	− 2 11 9·87	− 395·3	−21·5	− 0·1	7 8	26·27 26·01
445	Br. 997	5·69 B 8	6 45 30·761	+345·56	− 0·15	− 0·11	+16 17 21·49	− 395·5	−24·6	− 1·4	9 10	26·02 26·24
446	BD − 14°, 1599	5·29 B 5	6 45 33·643	+272·03	+ 0·04	+ 0·02	−15 3 32·37	− 395·9	−19·4	− 0·5	7 9	28·68 28·45
447	BD + 25°, 1469	6·62 A 2	6 47 20·551	+370·37	− 0·26	− 0·13	+25 45 9·11	− 411·1	−26·3	+ 2·0	5 7	26·26 25·94
448	Gr. 1237	6·04 F 0	6 49 49·939	+433·31	− 0·64	+ 0·13	+44 0 18·51	− 432·4	−30·7	− 1·2	9 10	27·65 28·11
449	θ C. Maj	4·25 K 2	6 50 42·209	+279·70	+ 0·02	− 0·95	−11 56 36·63	− 439·9	−19·8	− 1·8	22 40	28·68 29·39
450	BD + 10°, 1335	5·88 B 8	6 52 18·144	+330·36	− 0·12	− 0·18	+10 3 17·44	− 453·5	−23·4	− 2·1	5 8	28·90 27·49

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
451	ι C. Maj.....	4·39 B 5	6 52 47·468	+267·61	+ 0·03	− 0·02	−16 57 21·39	− 457·6	−18·9	+ 1·0	6 7	27·64 27·99
452	Br. 1010.....	6·15 K 2	6 53 56·272	+409·38	− 0·53	− 0·32	+38 9 24·73	− 467·4	−28·9	−17·5	4 6	25·78 25·91
453	BD + 3°, 1488....	6·02 K 0	6 55 0·282	+315·69	− 0·08	− 0·08	+ 3 42 19·23	− 476·5	−22·2	− 0·7	4 4	25·32 25·64
454	ε C. Maj.....	1·63 B 1	6 55 40·616	+235·77	+ 0·06	+ 0·02	−28 52 8·55	− 482·2	−16·6	− 0·3	5	27·70
455	BD − 8°, 1662....	5·84 A 0	6 56 47·488	+288·38	− 0·01	− 0·15	− 8 18 4·25	− 491·6	−20·3	− 1·1	6 8	29·48 29·14
456	ω Gemi.....	5·21 K 0	6 57 50·599	+365·77	− 0·31	− 0·03	+24 19 25·30	− 500·6	−25·7	− 0·3	3 4	27·43 27·15
457	CD − 25°, 3911...	5·80 B 3	6 58 0·908	+246·65	+ 0·05	− 0·07	−25 6 29·45	− 502·0	−17·3	+ 1·9	3 4	28·03 29·61
458	Gr. 1256.....	6·54 K 0	6 59 24·291	+530·24	− 1·73	+ 0·38	+59 54 53·19	− 513·8	−37·2	− 0·1	5 7	28·94 27·85
459	ζ Gemi.....	* G 0	6 59 39·639	+356·03	− 0·27	− 0·03	+20 40 54·07	− 515·9	−25·0	− 0·3	18 32	28·87 30·05
460	γ C. Maj.....	4·07 B 5	7 0 21·806	+271·45	+ 0·02	+ 0·02	−15 31 16·59	− 521·9	−19·0	− 0·8	2 5	28·14 28·77
461	BD − 21°, 1732...	6·19 K 0	7 1 35·328	+255·44	+ 0·04	+ 0·15	−21 55 2·44	− 532·2	−17·8	− 6·0	4 5	29·91 28·91
462	BD − 11°, 1790...	5·28 B 3	7 3 9·338	+281·87	− 0·00	− 0·09	−11 10 38·15	− 545·4	−19·7	− 0·6	6	32·79
463	BD + 34°, 1533...	6·47 K 0	7 3 18·135	+393·84	− 0·52	− 0·10	+33 57 3·93	− 546·6	−27·5	− 3·8	4	29·15
464	BD + 7°, 1607....	5·92 K 0	7 3 46·170	+324·40	− 0·14	+ 0·00	+ 7 35 24·69	− 550·6	−22·6	− 3·8	9	33·67 33·46
465	Br. 1030.....	5·58 K 0	7 4 3·930	+344·24	− 0·23	− 0·03	+16 3 5·77	− 553·1	−24·0	−10·4	9	31·48
466	Gr. 1262.....	6·45 K 0	7 5 14·898	+700·62	− 4·74	+ 0·42	+71 56 27·65	− 563·0	−48·9	+ 2·0	8 7	31·66 31·65
467	δ C. Maj.....	1·98 F 8	7 5 20·439	+243·98	+ 0·05	− 0·03	−26 16 22·99	− 563·8	−16·9	+ 0·3	2 3	32·14 32·50
468	51H Ceph.....	5·26 M 0	7 5 56·772	+2898·92	−153·78	− 4·89	+87 10 9·68	− 568·8	−405·0	− 3·6	205 254	29·13 28·76
469	Br. 1034.....	5·60 A 2	7 6 43·987	+372·45	− 0·41	− 0·14	+26 58 52·23	− 575·5	−25·9	− 4·1	4	28·65
470	Gr. 1272.....	5·69 M 0	7 7 32·710	+468·35	− 1·24	+ 0·08	+51 33 17·62	− 582·2	−32·5	+ 0·9	4	29·13
471	Br. 1045.....	5·40 F 0	7 7 33·598	+306·89	− 0·09	− 0·21	− 0 10 37·62	− 582·4	−21·3	− 1·2	4	31·16
472	BD + 47°, 1411...	6·62 A 5	7 7 37·558	+447·96	− 1·03	− 0·33	+47 44 5·12	− 582·9	−31·1	− 8·3	4	32·43
473	δ Mono.....	4·09 A 0	7 8 2·008	+306·46	− 0·09	− 0·01	− 0 22 3·21	− 586·3	−21·2	+ 0·6	1	24·90
474	BD + 12°, 1469...	5·84 K 0	7 10 21·715	+334·93	− 0·22	− 0·37	+12 14 46·13	− 605·8	−23·1	− 2·0	4	27·15
475	λ Gemi.....	3·65 A 2	7 13 46·959	+345·26	− 0·29	− 0·30	+16 40 36·93	− 634·2	−23·7	− 4·3	9 19	26·64 26·24
476	Pi 7h, 56.....	6·36 K 2	7 13 52·220	+292·74	− 0·05	− 0·10	− 6 32 41·57	− 635·0	−20·1	+ 1·0	3 4	28·46 28·38
477	25H Caml.....	5·11 M 3	7 15 23·732	+1275·81	−27·29	+ 0·01	+82 33 38·11	− 647·6	−87·9	− 4·1	142 171	29·73 29·47
478	Pi 7h, 63.....	6·06 G 5	7 15 27·160	+313·64	− 0·13	− 0·03	+ 2 52 45·50	− 648·1	−21·5	− 1·8	4 5	28·55 28·48
479	R C. Maj.....	* F 0	7 16 4·452	+270·45	+ 0·01	+ 1·10	−16 15 12·94	− 653·2	−18·5	−13·2	4	30·34
480	Br. 1063.....	5·21 K 0	7 17 2·007	+402·01	− 0·73	− 0·72	+36 54 11·12	− 661·1	−27·5	− 2·8	6 8	29·67 28·92
481	Br. 1065.....	5·16 K 2	7 17 31·365	+354·63	− 0·36	− 0·44	+20 35 11·66	− 665·2	−24·2	− 3·1	5 7	26·39 26·04
482	CD − 26°, 4223...	5·84 B 3	7 17 52·155	+243·58	+ 0·05	+ 0·06	−26 49 19·45	− 668·0	−16·6	+ 1·6	4	28·70
483	ι Gemi.....	3·89 K 0	7 21 4·120	+373·79	− 0·53	− 0·88	+27 56 54·29	− 694·4	−25·4	− 8·9	5 5	27·54 26·57
484	η C. Maj.....	2·43 B 5	7 21 7·651	+237·35	+ 0·05	− 0·05	−29 9 21·23	− 694·8	−16·1	+ 0·4	4	29·69
485	BD + 78°, 254....	7·40 G 0	7 21 27·034	+942·56	−13·78	− 1·18	+78 50 38·10	− 697·5	−64·3	−10·6	9 8	29·51 29·76
486	BD − 13°, 2001...	5·82 F 0	7 21 41·529	+276·98	− 0·01	− 1·52	−13 36 11·06	− 699·5	−18·8	− 0·6	5 6	27·77 27·34
487	β C. Min.....	3·09 B 8	7 23 4·979	+325·82	− 0·21	− 0·34	+ 8 26 29·86	− 710·8	−22·1	− 4·2	15 42	28·57 27·90
488	BD − 22°, 1874...	5·48 B 2	7 23 48·590	+254·48	+ 0·04	− 0·08	−22 56 1·94	− 716·8	−17·2	+ 0·1	6 7	32·84 32·89
489	γ C. Min.....	4·60 K 0	7 24 4·763	+327·21	− 0·22	− 0·42	+ 9 4 42·64	− 719·0	−22·1	+ 1·4	4 4	28·07 28·58
490	Br. 1082.....	5·09 K 0	7 25 8·918	+373·69	− 0·55	− 0·23	+28 4 20·08	− 727·7	−25·2	− 2·7	12 12	31·59 31·25
491	6 C. Min.....	4·85 K 0	7 25 37·313	+334·10	− 0·27	+ 0·00	+12 9 46·57	− 731·6	−22·5	− 1·9	4 15	28·85 29·96
492	BD − 4°, 1979....	6·38 K 0	7 27 8·932	+296·27	− 0·08	− 0·07	− 5 4 6·02	− 744·0	−19·9	− 0·8	4 5	27·17 27·38
493	BD + 17°, 1596...	5·64 K 0	7 27 28·964	+345·78	− 0·36	+ 0·34	+17 14 48·87	− 746·7	−23·2	− 8·4	9 10	26·01 25·92
494	BD + 46°, 1286...	5·80 K 5	7 31 5·126	+436·43	− 1·28	− 0·24	+46 20 49·81	− 775·9	−29·2	− 4·1	8 8	28·77 28·27
495	BD − 7°, 2065....	6·43 K 2	7 32 39·184	+289·70	− 0·06	+ 0·23	− 8 8 38·47	− 788·5	−19·2	+ 0·1	7 8	31·58 30·91

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.)
T in centuries from 1925·0, T′ in centuries from epoch.

* 459. $3^m.7$ to $4^m.1$.

* 479. $5^m.4$ to $6^m.0$.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
496	Gr. 1336.....	6·59 B 9	7 33 16·053	+476·64	− 1·89	− 0·14	+54 4 20·24	− 793·4	−31·7	− 7·6	3 4	29·82 30·90
497	BD − 19°, 1967...	5·66 B 3	7 33 23·192	+263·75	+ 0·02	+ 0·09	−19 32 2·71	− 794·4	−17·5	+ 0·7	6	32·03
498	BD + 33°, 1560...	6·91 G 5	7 33 30·062	+388·03	− 0·76	− 0·08	+33 21 25·07	− 795·3	−25·8	− 4·3	4	29·40
499	25 Mono.....	5·17 F 5	7 33 32·894	+298·83	− 0·10	− 0·46	− 3 56 32·68	− 795·7	−19·8	+ 1·7	22 52	27·93 28·28
500	BD + 14°, 1713...	6·66 B 9	7 33 37·161	+338·34	− 0·33	+ 0·13	+14 12 47·28	− 796·2	−22·5	− 9·8	5 8	30·56 30·80
501	Br. 1093.....	6·20 K 0	7 34 37·679	+497·62	− 2·27	− 0·17	+57 15 20·45	− 804·3	−33·0	− 1·4	6	32·14
502	α C. Min.....	0·48 F 5	7 35 22·424	+318·87	− 0·21	− 4·72	+ 5 25 3·55	− 810·3	−21·1	−103·4	18 30	28·44 28·23
503	BD + 23°, 1780...	6·18 K 5	7 36 29·143	+359·54	− 0·51	− 0·08	+23 11 35·13	− 819·2	−23·7	− 0·4	5 8	27·10 26·86
504	Pi 7h, 189.....	6·36 G 5	7 39 14·420	+308·06	− 0·16	+ 0·05	+ 0 22 4·75	− 841·1	−20·2	− 1·2	5	25·94
505	Br. 1098.....	6·00 K 0	7 39 30·703	+574·99	− 4·02	+ 0·56	+65 38 12·80	− 843·3	−37·8	+ 1·9	12 15	26·92 26·72
506	Br. 1100.....	6·35 A 5	7 39 40·672	+545·27	− 3·35	− 0·50	+63 0 47·87	− 844·6	−35·9	− 6·0	7 12	29·99 28·32
507	BD + 39°, 1998...	6·75 F 8	7 39 50·464	+408·04	− 1·04	+ 0·42	+39 45 4·12	− 845·9	−26·8	−68·7	8 10	25·16 25·06
508	Br. 1118.....	4·82 K 5	7 40 30·605	+242·32	+ 0·05	− 0·13	−28 13 53·72	− 851·2	−15·8	+ 2·1	3 4	26·15 26·86
509	BD + 39°, 2001...	7·07 F 0	7 40 37·187	+407·80	− 1·05	− 0·32	+39 43 44·31	− 852·0	−26·8	− 1·4	1	24·22
510	β Gemi.....	1·21 K 0	7 40 43·495	+372·15	− 0·65	− 4·71	+28 12 30·75	− 852·9	−24·4	− 5·4	7 12	28·79 27·28
511	Br. 1115.....	5·02 K 2	7 41 46·952	+384·11	− 0·44	− 0·53	+18 41 38·68	− 861·2	−22·7	− 6·2	9 13	27·25 26·86
512	BD − 22°, 2027...	5·84 B 5	7 43 59·072	+257·94	+ 0·03	− 0·09	−22 20 2·54	− 878·6	−16·7	+ 0·4	7 8	29·66 29·24
513	BD + 5°, 1790....	6·95 K 0	7 44 4·218	+319·05	− 0·23	− 0·07	+ 5 35 48·15	− 879·3	−20·7	− 3·6	8 9	25·04 25·16
514	BD + 26°, 1656...	6·82 G 5	7 45 13·021	+366·88	− 0·63	− 0·26	+26 27 9·79	− 888·3	−23·8	− 1·8	11 14	27·14 26·94
515	ξ Pupp.....	3·47 G 0	7 46 8·343	+252·37	+ 0·04	− 0·04	−24 40 13·37	− 895·5	−16·3	− 0·2	5 4	30·53 30·35
516	BD − 10°, 2253...	6·32 K 0	7 47 22·059	+284·24	− 0·05	+ 0·02	−10 56 10·70	− 905·1	−18·3	− 4·2	5 6	28·54 28·66
517	9 Pupp.....	5·34 G 0	7 48 17·840	+278·28	− 0·03	− 0·40	−13 41 53·87	− 912·3	−17·9	−34·0	36 70	28·56 28·69
518	BD − 2°, 2322....	6·86 A 5	7 48 22·664	+301·33	− 0·14	− 0·22	− 2 51 40·02	− 913·0	−19·4	− 0·4	5	30·58
519	Br. 1137.....	5·36 A 0	7 51 17·323	+350·49	− 0·51	− 0·12	+20 4 59·47	− 935·5	−22·4	− 4·5	21 24	29·06 28·66
520	BD + 30°, 1612...	6·86 K 0	7 51 34·173	+375·61	− 0·77	− 0·03	+30 3 4·01	− 937·7	−24·0	+ 1·1	7 8	26·26 26·25
521	BD + 44°, 1693...	6·47 K 0	7 53 0·762	+421·67	− 1·40	+ 0·37	+44 10 45·01	− 948·9	−26·9	+ 0·9	7 8	25·59 25·41
522	Br. 1139.....	5·40 K 0	7 54 27·317	+312·25	− 0·21	− 1·07	+ 2 25 32·96	− 959·9	−19·8	+ 9·7	10 15	25·14 25·01
523	Pi 7h, 267.....	6·20 K 5	7 55 23·845	+335·27	− 0·39	− 0·12	+13 26 50·07	− 967·2	−21·2	− 1·6	10 14	27·90 27·27
524	CD − 29°, 5236...	4·85 A 2	7 55 40·628	+239·23	+ 0·07	− 0·08	−30 7 54·70	− 969·2	−15·1	+ 0·3	4 4	29·97 29·72
525	BD − 18°, 2118...	4·64 A 2	7 56 30·332	+268·92	+ 0·00	− 0·06	−18 11 32·47	− 975·7	−16·9	− 4·7	4	27·38
526	BD + 9°, 1843....	6·11 F 5	7 57 46·404	+325·97	− 0·32	− 0·04	+ 9 7 19·58	− 985·3	−20·5	+ 2·5	7	25·74
527	BD − 5°, 2339....	6·30 G 0	7 58 44·832	+294·82	− 0·11	+ 0·05	− 6 7 38·03	− 992·7	−18·5	− 2·2	6	30·13
528	8 Canc.....	5·11 A 0	8 0 53·844	+334·65	− 0·40	− 0·23	+13 19 58·70	−1009·0	−20·9	− 7·1	39 86	28·85 29·05
529	CD − 25°, 5530...	6·66 K 2	8 1 23·398	+252·31	+ 0·05	− 0·08	−25 29 9·02	−1012·7	−15·7	− 1·0	4 3	31·13 30·81
530	BD − 0°, 1903....	6·60 K 0	8 1 59·850	+306·56	− 0·19	− 0·15	− 0 21 30·15	−1017·3	−19·0	− 1·4	4	30·15
531	BD − 20°, 2395...	5·25 A 3	8 3 59·397	+264·82	+ 0·02	− 0·11	−20 20 11·97	−1032·3	−16·3	− 0·9	5 6	26·70 26·43
532	ρ Pupp.....	2·88 F 5	8 4 20·888	+256·12	+ 0·05	− 0·63	−24 5 13·39	−1035·0	−15·8	+ 4·7	10 11	31·18 30·18
533	Pi 7h, 308.....	6·64 F 8	8 5 18·792	+389·25	− 1·07	+ 1·67	+35 40 51·31	−1042·2	−24·0	−23·8	4 6	26·41 25·49
534	BD + 53°, 1221...	6·81 F 5	8 5 24·769	+461·32	− 2·33	+ 0·28	+53 28 5·83	−1043·0	−28·5	− 7·0	5 5	25·09 25·20
535	Br. 1167.....	5·83 G 5	8 5 56·294	+362·21	− 0·72	− 0·48	+25 44 9·56	−1046·9	−22·3	−35·2	7 9	26·70 26·80
536	BD + 49°, 1711...	7·08 K 0	8 6 43·553	+438·94	− 1·91	− 0·13	+49 10 57·99	−1052·7	−27·0	− 0·5	6	28·90
537	BD + 15°, 1775...	6·14 A 0	8 6 46·131	+337·43	− 0·45	− 0·18	+14 51 8·76	−1053·1	−20·7	− 2·0	8 9	28·46 28·00
538	Br. 1177.....	4·68 K 0	8 7 45·120	+281·72	− 0·04	− 0·18	−12 42 12·50	−1060·4	−17·2	+ 1·0	12 13	31·52 31·04
539	Pi 7h, 311.....	5·90 K 0	8 7 52·086	+479·72	− 2·79	− 0·20	+56 40 42·97	−1061·2	−29·4	− 3·6	7	27·29
540	Gr. 1391.....	6·17 A 0	8 10 10·327	+1182·64	−42·19	− 0·65	+82 40 0·71	−1078·3	−72·4	− 2·9	12 16	27·85 27·27

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.)
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″				
541	Br. 1160	6·20 K 5	8 12 26·177	+665·38	− 8·97	+ 0·12	+72 38 30·89	−1094·9	−40·4	− 2·8	11	10	27·62	27·77
542	β Canc	3·76 K 2	8 12 26·894	+325·85	− 0·36	− 0·31	+ 9 25 4·06	−1095·0	−19·7	− 5·1	31	70	28·93	29·04
543	BD + 4°, 1945	6·68 *	8 13 21·630	+315·97	− 0·27	− 0·01	+ 4 27 5·94	−1101·7	−19·0	+ 0·7	6		29·18	
544	Br. 1184	6·31 A 0	8 13 56·769	+275·21	− 0·01	− 0·13	−16 3 6·63	−1106·0	−16·5	− 1·0	6	7	28·47	28·15
545	BD − 9°, 2471	6·32 A 5	8 15 39·382	+287·86	− 0·08	− 0·37	− 9 55 51·19	−1118·4	−17·2	+ 2·6	4	5	27·58	26·91
546	λ Canc	5·87 A 0	8 16 4·693	+357·20	− 0·72	− 0·15	+24 15 35·10	−1121·5	−21·3	− 2·6	5	8	25·16	25·43
547	Pi 8h, 30	6·48 G 5	8 16 26·579	+505·82	− 3·69	+ 0·13	+60 52 12·53	−1124·1	−30·3	− 0·5	11	13	28·21	28·22
548	BD + 32°, 1725	7·48 A 3	8 19 9·620	+377·29	− 1·02	− 0·04	+32 32 7·50	−1143·7	−22·3	+ 0·0	4	6	26·67	26·49
549	Br. 1187	6·29 K 5	8 19 49·142	+328·32	− 0·40	+ 0·03	+10 52 29·24	−1148·4	−19·4	− 2·7	5	8	28·21	26·96
550	CD − 28°, 5961	6·57 A 0	8 20 43·758	+247·42	+ 0·09	+ 0·02	−28 43 39·23	−1154·9	−14·5	+ 1·2	4		31·14	
551	Br. 1192	6·18 F 2	8 21 35·148	+341·20	− 0·55	− 1·32	+17 17 39·37	−1161·1	−20·0	−15·8	6	7	31·15	30·44
552	Pi 8h, 72	5·46 K 5	8 21 49·330	+259·27	+ 0·06	− 0·29	−23 48 7·29	−1162·7	−15·1	+ 2·1	4		31·66	
553	Pi 8h, 67	5·23 K 0	8 21 53·416	+322·21	− 0·35	− 0·23	+ 7 48 36·14	−1163·2	−18·9	− 0·8	5	6	29·12	28·29
554	Br. 1197	3·95 A 0	8 21 54·729	+300·32	− 0·16	− 0·44	− 3 39 38·76	−1163·4	−17·6	− 2·6	10	26	30·60	31·74
555	BD − 14°, 2517	5·91 A 2	8 22 26·501	+278·81	− 0·02	− 0·09	−14 41 4·94	−1167·1	−16·3	+ 3·0	3	4	31·25	31·47
556	Br. 1199	5·41 A 5	8 22 42·335	+300·18	− 0·16	− 0·36	− 3 44 23·63	−1169·0	−17·5	− 6·2	4		27·91	
557	Gr. 1119	7·01 A 0	8 23 37·176	+5735·85	+1597·28	− 3·20	+88 51 28·10	−1175·6	−338·4	+ 0·6	130	122	29·61	28·60
558	BD + 26°, 1789	6·67 A 0	8 25 19·435	+360·82	− 0·82	− 0·23	+26 26 37·54	−1187·5	−20·9	− 1·5	7	10	27·16	26·47
559	Br. 1204	6·14 F 2	8 28 33·266	+386·66	− 1·25	− 1·17	+36 41 31·08	−1210·2	−22·2	− 0·6	6	13	25·02	25·05
560	BD + 36°, 1840	5·83 A 2	8 29 55·015	+386·26	− 1·26	− 0·22	+36 40 40·13	−1219·7	−22·1	− 5·0	2		24·72	
561	Br. 1202	5·69 G 0	8 32 33·139	+535·60	− 5·25	− 0·39	+65 16 54·26	−1237·9	−30·4	+ 8·5	11	12	29·14	29·02
562	Gr. 1431	6·69 A 0	8 32 58·394	+1105·30	−43·92	− 0·43	+82 30 27·55	−1240·8	−63·0	− 2·0	10	11	30·60	30·39
563	Br. 1213	5·98 A 0	8 33 1·870	+325·63	− 0·41	− 0·22	+ 9 55 2·73	−1241·2	−18·4	− 1·2	4	5	28·21	27·40
564	BD − 18°, 2416	7·06 G 5	8 33 33·415	+272·40	+ 0·02	+ 0·03	−18 25 6·08	−1244·8	−15·3	− 2·7	4		29·66	
565	δ Hyda	4·18 A 0	8 33 41·142	+318·22	− 0·33	− 0·46	+ 5 57 58·65	−1245·7	−17·9	− 1·3	15	32	27·99	28·24
566	BD + 51°, 1443	6·96 G 5	8 35 15·108	+439·10	− 2·45	− 0·24	+51 41 44·00	−1256·4	−24·7	+ 5·0	6		33·71	33·20
567	Br. 1220	6·68 F 0	8 35 24·221	+345·25	− 0·66	− 0·25	+20 2 37·38	−1257·4	−19·3	− 1·7	6	10	28·62	28·14
568	Br. 1214	5·52 K 0	8 35 50·402	+415·25	− 1·91	+ 0·28	+46 5 53·77	−1260·4	−23·3	+ 8·4	5	5	26·63	27·08
569	BD − 8°, 2452	6·48 A 0	8 37 23·328	+291·31	− 0·09	− 0·19	− 8 47 5·13	−1270·9	−16·1	− 0·3	3	6	26·85	26·31
570	η Hyda	4·32 B 3	8 39 18·242	+313·86	− 0·29	− 0·12	+ 3 40 7·88	−1283·8	−17·3	− 0·5	4	5	30·46	29·20
571	δ Canc	4·17 K 0	8 40 25·460	+341·34	− 0·63	− 0·10	+18 25 51·01	−1291·3	−18·8	−23·6	29	49	28·58	28·81
572	Br. 1233	6·14 K 0	8 40 45·528	+368·55	− 1·05	+ 0·00	+30 58 13·85	−1293·5	−20·2	− 0·8	4	5	26·13	26·36
573	Br. 1240	6·00 A 2	8 41 2·953	+317·91	− 0·34	− 0·02	+ 5 57 12·06	−1295·5	−17·4	− 0·8	6	8	29·47	29·03
574	BD − 20°, 2667	6·13 A 2	8 41 33·855	+268·43	+ 0·06	− 0·08	−20 53 41·10	−1298·9	−14·6	+ 0·3	8	10	32·83	32·90
575	BD − 10°, 2634	6·47 K 5	8 42 30·972	+288·06	− 0·06	− 0·14	−10 43 57·71	−1305·2	−15·7	+ 2·3	4		26·69	
576	ε Hyda	3·48 F 8	8 42 48·308	+319·17	− 0·35	− 1·28	+ 6 41 41·55	−1307·1	−17·4	− 5·4	5	7	25·25	25·23
577	CD − 26°, 6417	7·32 *	8 42 57·139	+257·15	+ 0·11	− 0·12	−26 20 16·82	−1308·1	−13·9	− 1·0	5		31·01	
578	Pi 8h, 167	5·22 A 0	8 43 26·863	+304·42	− 0·20	− 0·22	− 1 37 16·57	−1311·4	−16·5	− 0·2	3	5	26·86	26·41
579	Br. 1247	5·24 G 5	8 46 55·130	+403·61	− 1·81	− 0·10	+44 0 25·35	−1334·2	−21·7	+ 4·1	4		32·18	
580	BD + 59°, 1198	6·08 F 0	8 47 11·379	+475·32	− 3·78	+ 0·20	+59 20 18·51	−1336·0	−25·5	− 0·2	6	7	33·54	33·51
581	BD + 78°, 297	7·40 F 0	8 48 41·210	+791·16	−20·65	− 0·55	+78 25 57·56	−1345·7	−42·4	− 1·0	6	8	31·72	31·48
582	BD − 8°, 2518	7·42 *	8 50 35·406	+292·63	− 0·09	− 0·06	− 8 28 32·28	−1358·0	−15·4	− 0·3	5	6	31·59	30·34
583	ζ Hyda	3·30 K 0	8 51 25·761	+317·98	− 0·35	− 0·67	+ 6 13 55·22	−1363·4	−16·7	+ 1·1	22	33	29·44	30·48
584	BD − 17°, 2691	5·90 K 0	8 51 45·599	+275·58	+ 0·04	+ 0·18	−17 57 16·01	−1365·5	−14·4	− 0·3	5	7	32·62	33·09
585	60 Canc	5·70 K 0	8 51 49·874	+327·91	− 0·48	− 0·07	+11 54 49·60	−1366·0	−17·2	− 1·5	4	5	29·96	29·03

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 543. G0 + A2 F8.
* 577. K0 + A3.
* 582. F0 + A2.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
586	BD + 22°, 2029...	7·01 G 5	8 52 45·305	+346·94	− 0·76	+ 0·02	+22 8 57·07	−1371·9	−18·1	− 0·9	4	25·61
587	ι U. Maj.....	3·12 A 5	8 54 4·495	+416·18	− 2·23	− 4·42	+48 20 13·22	−1380·3	−21·7	−24·4	4	31·01
588	α Canc.....	4·27 A 3	8 54 23·184	+328·11	− 0·49	+ 0·24	+12 8 56·70	−1382·2	−17·0	− 3·7	27 47	29·08 29·46
589	Gr. 1496.....	6·54 K 5	8 55 44·954	+382·18	− 1·45	− 0·04	+37 53 49·83	−1390·8	−19·8	− 0·6	5 6	26·17 26·18
590	BD + 0°, 2449....	5·80 K 0	8 58 8·060	+306·97	− 0·23	− 0·34	− 0 11 19·18	−1405·8	−15·6	+ 7·4	7 8	26·35 26·47
591	κ U. Maj.....	3·68 A 0	8 58 30·714	+410·90	− 2·17	− 0·31	+47 27 15·31	−1408·1	−21·0	− 6·2	7 6	24·89 24·71
592	BD − 4°, 2530....	6·74 A 0	8 59 59·171	+299·22	− 0·14	− 0·05	− 4 52 25·44	−1417·3	−15·1	+ 0·3	5 8	25·81 25·82
593	BD + 84°, 196....	6·26 F 0	8 59 59·457	+1286·09	−81·05	+ 1·84	+84 29 8·60	−1417·3	−66·0	+ 1·4	10 12	28·41 28·20
594	ω Hyda.....	5·41 K 0	9 2 1·470	+316·12	− 0·34	− 0·11	+ 5 23 34·59	−1429·8	−15·8	− 1·0	4 5	26·71 26·82
595	τ Canc.....	5·38 G 5	9 3 30·051	+360·90	− 1·08	− 0·22	+29 57 23·94	−1438·9	−18·0	− 0·5	5	30·05
596	κ Canc.....	5·14 B 8	9 3 41·145	+325·30	− 0·47	− 0·16	+10 58 15·55	−1440·0	−16·2	− 1·3	34 63	28·30 28·81
597	Br. 1286.....	5·96 G 5	9 4 22·703	+354·38	− 0·96	− 0·92	+26 56 24·19	−1444·2	−17·6	−37·4	5 5	30·44 29·22
598	τ U. Maj.....	4·74 *	9 4 45·274	+495·46	− 5·15	+ 1·51	+63 49 12·73	−1446·5	−24·7	− 6·6	12 14	28·43 29·12
599	CD − 26°, 6766...	6·20 A 2	9 5 27·568	+261·38	+ 0·16	− 0·27	−26 27 48·43	−1450·7	−12·8	+ 1·2	4	33·15
600	BD − 11°, 2565...	5·81 K 0	9 5 35·702	+287·60	− 0·03	+ 0·13	−12 3 11·41	−1451·5	−14·1	− 1·1	3 4	26·21 27·44
601	BD − 20°, 2803...	7·42 K 0	9 5 45·123	+272·62	+ 0·09	+ 0·04	−20 37 21·06	−1452·5	−13·4	+ 0·8	4 5	31·10 31·22
602	Br. 1296.....	6·75 A 0	9 7 44·252	+337·55	− 0·67	− 0·25	+18 21 7·96	−1464·4	−16·5	− 2·6	14	25·78 25·85
603	θ Hyda.....	3·84 A 0	9 10 27·793	+311·42	− 0·28	+ 0·87	+ 2 37 52·50	−1480·6	−15·0	−31·5	19 48	27·64 28·80
604	Br. 1297.....	4·89 A 5	9 10 48·082	+432·59	− 3·05	+ 0·64	+54 19 58·10	−1482·6	−20·9	+ 5·5	5	25·62
605	Gr. 1522.....	6·54 G 5	9 12 13·879	+625·74	−12·46	− 0·86	+74 19 59·18	−1491·0	−30·2	− 7·2	11 11	29·54 29·74
606	Pi 9h, 19.....	5·70 A 0	9 12 29·706	+403·38	− 2·20	+ 0·21	+47 7 51·48	−1492·5	−19·3	+ 0·8	3 4	31·08 31·45
607	BD + 1°, 2267....	6·54 F 5	9 12 48·800	+308·90	− 0·25	− 0·66	+ 1 2 35·10	−1494·4	−14·7	− 1·5	4 5	31·12 29·79
608	Br. 1307.....	5·40 K 0	9 12 58·238	+297·86	− 0·12	+ 0·13	− 6 2 21·70	−1495·3	−14·1	+ 0·3	5	32·43
609	BD + 23°, 2072...	7·13 K 0	9 13 26·998	+345·69	− 0·84	− 0·28	+23 23 37·39	−1498·1	−16·4	− 1·7	7 8	27·93 27·13
610	BD − 16°, 2749...	6·91 A 0	9 15 26·983	+281·27	+ 0·05	+ 0·13	−16 29 2·49	−1509·6	−13·2	− 2·3	7 6	29·10 29·93
611	BD + 57°, 1214...	5·98 M 3	9 16 13·576	+442·22	− 3·52	− 0·10	+57 1 5·13	−1514·1	−20·8	− 1·3	5 4	28·80 28·72
612	α Lync.....	3·30 K 5	9 16 29·379	+367·86	− 1·33	− 1·76	+34 42 38·43	−1515·6	−17·2	+ 1·2	5 7	27·15 26·60
613	BD + 13°, 2074...	6·58 F 5	9 17 12·863	+328·09	− 0·54	− 0·29	+13 25 55·25	−1519·7	−15·3	− 8·6	8 8	29·60 28·96
614	θ Pyxi.....	4·93 M 0	9 18 10·238	+265·65	+ 0·18	− 0·11	−25 38 43·86	−1525·2	−12·2	− 1·1	4	30·46
615	BD + 37°, 1978...	6·45 A 5	9 19 44·732	+371·88	− 1·46	− 0·68	+36 54 35·34	−1534·1	−17·1	− 3·4	8 10	26·19 25·90
616	Pi 9h, 75.....	4·90 K 0	9 19 57·275	+260·61	+ 0·22	− 1·06	−28 30 43·95	−1535·3	−11·9	+ 1·6	4	28·51
617	Pi 9h, 74.....	6·27 K 0	9 21 23·310	+333·20	− 0·64	− 0·60	+16 54 36·42	−1543·3	−15·2	− 2·2	8 9	25·07 24·97
618	CD − 24°, 8060...	6·91 B 9	9 22 16·281	+267·68	+ 0·18	− 0·14	−25 0 44·98	−1548·2	−12·1	+ 1·8	6 6	31·17 31·70
619	α Hyda.....	2·16 K 2	9 23 54·061	+294·96	− 0·07	− 0·10	− 8 19 57·38	−1557·2	−13·2	+ 3·0	7 19	28·38 27·82
620	Br. 1334.....	4·78 F 5	9 25 20·502	+303·72	− 0·17	+ 0·85	− 2 26 25·24	−1565·1	−13·5	− 1·7	4 3	28·77 29·96
621	Br. 1331.....	5·98 K 0	9 26 11·512	+363·30	− 1·31	− 0·12	+33 59 10·27	−1569·8	−16·1	− 5·1	4	28·96
622	1H Drac.....	4·58 K 2	9 26 31·574	+873·09	−37·74	− 0·69	+81 39 35·87	−1571·6	−39·2	− 2·2	186 196	29·30 28·54
623	BD + 28°, 1768...	6·59 A 0	9 26 54·955	+350·77	− 1·02	− 0·26	+27 43 4·39	−1573·7	−15·5	− 2·9	4 5	31·75 31·22
624	θ U. Maj.....	3·26 F 8	9 27 50·718	+412·75	− 2·78	−10·28	+52 1 11·07	−1578·7	−18·2	−54·4	4	28·18
625	Br. 1339.....	5·28 K 0	9 27 56·420	+321·86	− 0·45	− 0·03	+10 2 50·11	−1579·2	−14·1	− 1·7	5	29·03
626	BD + 2°, 2217....	6·15 F 5	9 28 48·772	+310·42	− 0·27	− 0·11	+ 2 11 49·19	−1583·9	−13·5	− 3·9	4	30·04
627	BD − 12°, 2926...	6·21 K 5	9 29 19·661	+288·15	+ 0·03	− 0·01	−13 11 3·01	−1586·7	−12·5	− 2·0	6	27·16
628	Br. 1336.....	4·65 A 0	9 29 41·732	+413·04	− 2·84	− 0·70	+52 23 9·44	−1588·6	−18·0	− 4·2	6 7	25·73 25·83
629	BD − 18°, 2728...	6·25 A 0	9 32 4·367	+279·21	+ 0·13	− 0·28	−19 14 49·75	−1601·2	−11·9	− 4·9	5 6	28·60 28·52
630	BD + 67°, 602....	6·28 K 5	9 33 16·152	+501·07	− 6·83	− 0·13	+67 36 40·32	−1607·5	−21·5	− 4·5	11	27·65

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 598. F5 + A5.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″			
631	BD + 43°, 1943...	6·63 K 0	9 34 25·140	+382·48	− 1·93	− 0·38	+43 29 2·70	−1613·5	−16·2	− 7·0	4 5	25·41	25·58
632	BD + 20°, 2351...	6·80 B 9	9 34 42·284	+337·09	− 0·76	− 0·15	+20 38 11·88	−1615·0	−14·2	− 1·5	5 7	28·37	27·75
633	ι Hyda.....	4·10 K 0	9 36 1·544	+306·18	− 0·20	+ 0·31	− 0 48 5·94	−1621·8	−12·8	− 6·9	23 39	27·79	28·48
634	Br. 1358.....	6·19 B 9	9 36 7·572	+293·12	− 0·01	− 0·19	−10 13 50·44	−1622·3	−12·2	+ 0·2	4	28·45	
635	o Leon.....	3·76 *	9 37 8·888	+321·36	− 0·46	− 0·96	+10 14 3·50	−1627·5	−13·3	− 4·1	28 42	28·48	28·72
636	Br. 1354.....	5·50 K 0	9 37 21·834	+372·88	− 1·69	− 0·45	+40 6 1·50	−1628·6	−15·5	− 4·6	4 5	27·49	27·23
637	Gr. 1573.....	6·34 A 0	9 37 47·632	+395·95	− 2·42	− 0·26	+48 46 25·43	−1630·8	−16·4	− 1·9	4 5	29·50	29·46
638	13 L. Min.....	6·03 F 2	9 38 11·699	+362·44	− 1·40	− 0·12	+35 26 12·86	−1632·9	−15·0	− 5·5	5 6	29·85	29·24
639	ψ Leon.....	5·62 M 0	9 39 38·909	+326·95	− 0·57	+ 0·01	+14 21 55·80	−1640·2	−13·3	− 0·5	6 5	26·40	25·42
640	Pi 9h, 167.....	6·78 G 5	9 41 9·596	+275·91	+ 0·20	− 0·42	−22 24 25·81	−1647·8	−11·1	+ 0·6	8	26·73	
641	ε Leon.....	3·12 G 0	9 41 35·803	+341·26	− 0·89	− 0·32	+24 7 13·34	−1649·9	−13·8	− 1·8	11 15	24·85	25·02
642	BD + 19°, 2254...	6·92 K 0	9 41 42·046	+333·44	− 0·71	+ 0·16	+19 1 46·94	−1650·5	−13·4	− 1·9	5 7	25·02	25·06
643	BD + 7°, 2181....	5·99 M 0	9 42 12·714	+316·64	− 0·37	+ 0·03	+ 7 3 19·54	−1653·0	−12·7	− 3·4	8 10	29·72	29·40
644	υ U. Maj.....	3·89 F 0	9 45 40·216	+432·23	− 4·04	− 3·82	+59 23 32·80	−1669·9	−17·1	−15·9	11 14	24·86	24·85
645	Br. 1382.....	5·33 A 2	9 47 37·721	+340·92	− 0·91	+ 0·06	+24 45 3·55	−1679·3	−13·2	−18·4	14 19	25·59	25·60
646	BD + 61°, 1151...	6·42 K 0	9 49 35·934	+439·72	− 4·54	+ 0·09	+61 28 14·58	−1688·7	−16·9	− 0·4	14 15	26·46	26·32
647	Br. 1391.....	6·60 F 2	9 52 7·660	+352·77	− 1·26	− 0·37	+32 44 26·16	−1700·5	−13·2	+ 0·7	15 20	26·63	26·33
648	BD − 6°, 3033....	7·03 K 0	9 52 24·370	+298·25	− 0·04	− 0·19	− 7 17 20·29	−1701·8	−11·1	− 1·2	12 13	26·58	26·41
649	Gr. 1594.....	5·71 K 5	9 54 42·682	+414·96	− 3·58	− 0·37	+57 10 17·24	−1712·3	−15·4	− 3·5	6 8	24·87	24·83
650	BD + 22°, 2148..	6·61 A 2	9 55 17·625	+334·78	− 0·80	− 0·29	+21 40 48·93	−1715·0	−12·3	+ 2·7	7	27·25	
651	π Leon.....	4·89 M 0	9 56 15·045	+317·43	− 0·40	− 0·21	+ 8 24 17·17	−1719·3	−11·5	− 2·8	52 106	28·89	28·98
652	BD + 84°, 225....	6·48 K 0	9 56 48·951	+990·58	−70·12	− 0·31	+84 16 56·41	−1721·8	−36·6	+ 0·4	11	28·09	
653	BD − 0°, 2281....	7·16 A 0	9 57 45·510	+308·06	− 0·18	.....	− 0 39 21·91	−1726·0	−11·0	.....	1	24·22	
654	BD − 0°, 2285....	7·02 K 0	9 58 59·405	+306·45	− 0·17	+ 0·06	− 0 42 12·53	−1731·5	−10·9	− 8·9	11 12	26·31	26·47
655	CD − 23°, 8973...	5·80 F 0	10 0 52·983	+277·84	+ 0·28	− 0·71	−23 55 18·56	−1739·8	− 9·7	+ 2·2	9	26·14	
656	CD − 27°, 7179...	6·87 B 9	10 1 24·571	+272·39	+ 0·35	− 0·26	−27 49 25·95	−1742·1	− 9·4	− 0·5	3 2	30·62	30·78
657	BD + 45°, 1798...	7·49 F 2	10 2 28·702	+373·82	− 2·09	− 0·39	+45 25 33·22	−1746·7	−13·0	− 2·0	5 6	28·82	28·23
658	Br. 1404.....	6·29 G 5	10 2 52·108	+314·12	− 0·33	− 0·23	+ 5 58 40·26	−1748·3	−10·8	− 2·1	6 9	27·78	27·12
659	η Leon.....	3·58 A 0	10 3 14·727	+327·37	− 0·64	− 0·01	+17 7 44·54	−1749·9	−11·3	− 0·8	48 94	29·22	29·07
660	α Leon.....	1·34 B 8	10 4 22·691	+321·40	− 0·50	− 1·69	+12 20 4·06	−1754·8	−10·9	+ 0·1	15 14	27·93	27·84
661	Br. 1408.....	7·11 G 5	10 5 1·525	+329·28	− 0·70	+ 0·38	+18 53 59·64	−1757·5	−11·2	− 6·8	4	29·28	
662	BD − 12°, 3101...	5·42 F 0	10 6 26·435	+293·26	+ 0·09	− 0·87	−12 26 40·89	−1763·4	− 9·8	−11·7	4 3	29·73	29·91
663	Pi 9h, 254.....	6·51 K 0	10 6 28·002	+362·56	− 1·74	− 0·12	+41 1 50·93	−1763·5	−12·2	− 1·0	5 7	25·22	25·64
664	Gr. 1619.....	6·14 K 0	10 6 46·350	+356·38	− 1·53	− 0·24	+37 46 19·41	−1764·8	−11·9	− 3·3	4 6	27·54	26·78
665	λ Hyda.....	3·83 K 0	10 6 55·760	+293·85	+ 0·08	− 1·39	−11 58 58·41	−1765·4	− 9·8	− 9·3	40 80	29·36	29·56
666	BD + 28°, 1852	6·96 G 5	10 8 27·191	+341·38	− 1·06	− 0·24	+28 36 47·23	−1771·7	−11·3	− 1·7	8 9	25·88	26·14
667	BD + 79°, 328....	6·72 A 0	10 8 30·136	+638·55	−22·33	+ 0·56	+79 19 8·81	−1771·9	−21·4	− 0·5	11 12	28·30	28·04
668	BD + 71°, 534....	6·58 A 3	10 11 49·776	+448·19	− 8·83	− 0·68	+71 26 9·41	−1785·3	−15·8	− 5·2	13 14	28·08	28·34
669	Br. 1424.....	5·91 G 0	10 12 23·245	+334·05	− 0·87	− 1·48	+23 52 35·23	−1787·5	−10·6	+ 2·9	7 8	25·65	25·58
670	λ U. Maj.....	3·52 A 2	10 12 34·773	+364·15	− 1·90	− 1·50	+43 17 22·17	−1788·3	−11·6	− 4·5	3 7	25·95	25·70
671	Br. 1426.....	5·74 M 0	10 12 39·271	+322·44	− 0·54	− 0·15	+14 6 10·30	−1788·6	−10·2	− 2·2	5 7	28·66	27·98
672	BD − 18°, 2885...	6·57 A 2	10 12 57·778	+286·64	+ 0·23	− 0·17	−18 56 1·84	−1789·8	− 9·0	− 1·3	7	29·83	
673	ε Sext.....	5·40 F 0	10 13 54·084	+299·22	+ 0·01	− 1·07	− 7 41 37·33	−1793·5	− 9·4	+ 0·3	30 68	28·79	29·65
674	Gr. 1638.....	6·22 K 0	10 15 40·664	+389·93	− 3·08	− 0·43	+54 35 38·22	−1800·4	−12·1	− 1·0	5	25·81	
675	Br. 1435.....	6·53 B 3	10 17 9·638	+309·98	− 0·22	− 0·05	+ 2 40 3·02	−1806·0	− 9·4	− 0·5	4	29·76	

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 635. F 5 + A 3.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
676	μ U. Maj.	3·21 K 5	10 17 51·934	+358·92	− 1·78	− 0·73	+41 52 38·76	−1808·7	−10·9	+ 2·5	7 8	30·00 30·16
677	BD − 22°, 2904	6·48 A 3	10 17 56·833	+282·45	+ 0·33	− 0·36	−23 19 57·93	−1809·0	− 8·5	+ 2·0	6 7	32·94 31·98
678	Br. 1438	5·83 A 3	10 18 47·425	+346·22	− 1·32	− 0·07	+34 17 14·78	−1812·2	−10·4	− 1·8	4 5	31·29 30·08
679	29H Caml	5·64 A 3	10 18 59·659	+914·22	−71·46	− 9·12	+84 38 4·17	−1813·0	−28·0	− 4·3	66 76	28·20 27·61
680	Pi 10h, 64	5·92 M 0	10 21 18·094	+316·28	− 0·39	+ 0·07	+ 9 9 59·45	−1821·4	− 9·2	− 4·2	6	29·25
681	CD − 28°, 8164	6·80 F 0	10 21 56·095	+276·78	+ 0·45	− 0·41	−28 48 44·45	−1823·8	− 8·0	+ 0·6	4	31·78
682	30H Caml	5·34 F 2	10 22 4·805	+754·46	−43·16	− 4·44	+82 56 28·96	−1824·3	−22·4	+ 2·3	106 91	30·47 29·50
683	μ Hyda	4·06 K 5	10 22 27·639	+290·99	+ 0·21	− 0·89	−16 27 10·75	−1825·7	− 8·4	− 8·1	2 3	26·70 27·51
684	BD + 60°, 1263	7·01 K 0	10 22 46·526	+402·47	− 3·98	− 0·79	+59 58 48·21	−1826·8	−11·7	− 3·3	8 10	31·38 31·32
685	α Antl	4·42 K 5	10 23 42·981	+272·94	+ 0·50	− 0·60	−30 41 6·29	−1830·2	− 7·8	+ 0·8	4	29·76
686	BD + 16°, 2123	7·17 F 8	10 24 25·087	+322·94	− 0·59	− 0·90	+16 8 20·53	−1832·7	− 9·1	− 1·0	6 8	26·57 26·48
687	BD + 29°, 2057	6·92 K 0	10 25 41·511	+336·87	− 1·05	+ 0·11	+28 57 55·67	−1837·1	− 9·4	− 0·5	11 13	26·16 26·02
688	Gr. 1658	4·84 A 5	10 28 51·628	+351·97	− 1·68	− 1·20	+40 48 43·54	−1848·1	− 9·5	− 0·8	6 5	27·67
689	ρ Leon	3·85 B 0	10 28 51·773	+316·12	− 0·39	− 0·05	+ 9 41 35·16	−1848·1	− 8·5	− 0·6	44 91	28·78 29·41
690	Br. 1465	5·58 A 2	10 29 13·838	+343·88	− 1·36	− 0·24	+35 22 31·87	−1849·3	− 9·3	− 1·4	10 12	26·56 26·26
691	BD + 22°, 2236	7·32 K 0	10 30 18·485	+327·85	− 0·77	+ 0·03	+21 58 52·70	−1852·9	− 8·7	− 0·5	5 6	29·00 28·38
692	BD + 2°, 2334	6·73 K 2	10 31 14·065	+309·57	− 0·20	− 0·18	+ 2 35 32·67	−1856·0	− 8·1	+ 0·2	4 7	28·23 27·40
693	BD − 11°, 2918	5·85 F 8	10 32 48·215	+296·89	+ 0·14	+ 1·73	−11 49 38·37	−1861·1	− 7·6	−67·6	11 12	26·26 26·18
694	BD − 8°, 2963	7·12 G 0	10 33 15·460	+299·95	+ 0·07	− 0·66	− 8 26 57·91	−1862·6	− 7·7	− 5·9	7 8	25·55 25·40
695	φ Hyda	5·11 K 0	10 34 55·525	+292·93	+ 0·25	− 0·71	−16 29 12·13	−1868·0	− 7·3	+ 2·2	8 12	27·00 27·10
696	BD + 47°, 1797	7·30 A 2	10 35 39·560	+359·25	− 2·15	− 0·39	+47 13 56·68	−1870·3	− 9·0	− 5·0	9 11	27·24 26·80
697	Br. 1458	6·70 A 0	10 36 10·529	+602·99	−25·42	+ 0·74	+80 49 9·18	−1871·9	−15·3	+ 0·9	16 18	27·83 27·66
698	BD + 11°, 2269	7·29 K 5	10 38 19·959	+316·13	− 0·40	− 0·33	+10 44 54·95	−1878·5	− 7·6	− 2·5	8 10	25·88 25·76
699	Br. 1487	6·34 K 0	10 39 27·345	+311·42	− 0·25	+ 0·14	+ 5 8 30·04	−1882·0	− 7·4	− 3·4	7 10	25·26 25·28
700	CD − 23°, 9500	6·81 K 0	10 40 52·279	+287·53	+ 0·43	− 0·10	−23 35 29·95	−1886·2	− 6·7	+ 2·1	7 8	27·42 27·15
701	Br. 1492	5·64 K 0	10 42 22·203	+322·82	− 0·66	+ 0·66	+19 17 14·34	−1890·6	− 7·4	− 4·5	10 12	25·33
702	CD − 25°, 8237	6·86 K 0	10 43 8·725	+286·16	+ 0·48	− 1·33	−25 39 12·86	−1892·8	− 6·5	+ 4·7	4	28·76
703	BD − 1°, 2446	6·19 M 0	10 44 51·048	+306·11	− 0·07	− 0·09	− 1 33 45·32	−1897·7	− 6·8	+ 0·5	4	28·76
704	53 Leon	5·27 A 0	10 45 18·932	+315·55	− 0·39	− 0·04	+10 56 32·92	−1899·0	− 7·0	− 3·1	48 110	28·25 28·97
705	Br. 1501	6·12 F 5	10 45 46·543	+330·25	− 0·99	− 0·04	+28 22 13·16	−1900·3	− 7·3	+ 2·7	7 9	29·68 29·18
706	Pi 10h, 171	6·58 K 0	10 48 2·533	+361·86	− 2·65	− 0·78	+52 54 11·27	−1906·5	− 7·7	− 5·9	7 9	25·24 25·25
707	BD − 12°, 3293	5·84 G 0	10 50 34·261	+297·81	+ 0·23	+ 0·00	−13 21 30·86	−1913·2	− 6·1	+ 0·9	10 14	26·35 26·12
708	Br. 1517	6·05 F 2	10 51 50·874	+308·06	− 0·12	+ 0·70	+ 1 8 14·56	−1916·5	− 6·2	− 0·4	14 15	24·88 24·91
709	BD + 20°, 2538	6·94 K 0	10 54 36·989	+320·99	− 0·65	+ 0·11	+20 1 26·53	−1923·5	− 6·2	− 1·8	10 12	26·35 26·34
710	BD − 18°, 3072	6·96 K 0	10 55 15·493	+294·31	+ 0·38	+ 0·28	−19 12 4·25	−1925·0	− 5·6	− 8·4	5 6	30·29 30·28
711	BD + 36°, 2139	6·22 M 0	10 55 21·913	+334·79	− 1·34	+ 0·59	+36 29 46·53	−1925·3	− 6·4	− 5·6	3 5	29·62 28·27
712	BD − 9°, 3182	7·06 A 0	10 55 32·185	+300·79	+ 0·16	− 0·20	− 9 55 23·77	−1925·7	− 5·7	+ 2·2	4	27·22
713	BD + 12°, 2284	6·36 F 5	10 55 45·930	+315·21	− 0·40	− 1·58	+12 6 26·45	−1926·3	− 5·9	+ 3·5	4 5	31·12 30·92
714	58 Leon	5·05 K 0	10 56 41·231	+309·84	− 0·18	+ 0·09	+ 4 1 13·86	−1928·5	− 5·7	− 1·9	34 86	29·12 29·37
715	β U. Maj	2·44 A 0	10 57 19·674	+362·40	− 3·07	+ 1·00	+56 47 5·71	−1930·0	− 6·7	+ 2·9	6	31·12
716	BD + 62°, 1160	7·12 F 8	10 58 44·776	+373·82	− 3·98	− 1·70	+62 3 33·61	−1933·3	− 6·8	− 7·3	10	28·43
717	BD − 2°, 3270	7·13 G 5	10 58 47·820	+305·37	+ 0·01	− 0·14	− 3 6 30·25	−1933·4	− 5·5	− 2·6	6	26·92
718	α U. Maj	1·95 K 0	10 59 6·651	+373·70	− 3·99	− 1·70	+62 9 22·41	−1934·2	− 6·7	− 7·0	11	30·11 30·60
719	BD + 32°, 2102	7·32 G 5	11 0 33·252	+328·56	− 1·09	− 0·21	+31 50 27·81	−1937·4	− 5·7	+ 1·6	7 9	26·78 26·46
720	χ Leon	4·66 F 0	11 1 8·826	+311·89	− 0·27	− 2·29	+ 7 44 30·49	−1938·7	− 5·4	− 5·0	25 62	29·12 29·17

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
721	BD − 10°, 3190...	6·14 A 3	11 1 48·012	+300·95	+ 0·20	+ 0·10	−10 40 55·80	−1940·2	− 5·1	− 9·6	6	27·74
722	BD + 18°, 2452...	6·59 K 5	11 2 45·561	+318·10	− 0·57	+ 0·16	+18 8 36·20	−1942·3	− 5·3	− 3·7	6 8	26·41 26·25
723	BD − 20°, 3347...	7·22 A 0	11 2 51·660	+294·78	+ 0·44	− 0·28	−20 45 40·51	−1942·5	− 4·9	− 1·2	7	31·12 31·25
724	BD + 72°, 515....	6·87 F 0	11 3 18·675	+410·20	− 7·69	− 0·78	+72 21 54·79	−1943·5	− 6·9	− 1·3	11	29·18 29·04
725	BD + 82°, 325....	7·06 G 0	11 4 27·580	+539·61	−26·49	− 4·81	+82 8 30·94	−1945·9	− 9·0	−19·0	11 12	28·57 28·48
726	Br. 1541.....	5·63 A 2	11 4 47·786	+322·19	− 0·80	+ 0·04	+25 3 53·34	−1946·6	− 5·2	− 0·1	11 15	26·90 26·94
727	Br. 1544.....	5·49 A 2	11 5 6·005	+290·65	+ 0·63	− 0·61	−27 40 25·16	−1947·2	− 4·6	− 2·3	4 6	28·49 27·56
728	ψ U. Maj.....	3·15 K 0	11 5 27·172	+338·68	− 1·80	− 0·59	+44 54 20·88	−1948·0	− 5·4	− 3·5	9 11	25·36 25·45
729	BD + 86°, 161....	7·17 A 2	11 5 44·316	+760·89	−83·18	− 3·52	+86 2 51·54	−1948·6	−12·6	− 0·1	19	32·02 31·94
730	BD + 48°, 1919...	7·24 F 5	11 6 12·200	+342·05	− 2·05	− 0·33	+48 12 13·71	−1949·5	− 5·4	+ 4·8	4 6	27·79 27·28
731	BD + 69°, 602....	6·42 A 2	11 7 24·763	+385·15	− 5·68	+ 0·53	+68 40 45·58	−1951·9	− 6·0	+ 0·7	10 11	27·83 27·68
732	β Crat.....	4·52 A 2	11 7 57·957	+294·87	+ 0·50	+ 0·00	−22 24 58·28	−1953·0	− 4·4	−10·4	8	28·90
733	Gr. 1746.....	6·48 A 2	11 8 23·118	+350·38	− 2·75	+ 0·00	+55 18 7·76	−1953·9	− 5·3	− 0·8	9 10	26·93 26·57
734	δ Leon.....	2·58 A 3	11 10 7·283	+318·32	− 0·64	+ 1·04	+20 56 4·66	−1957·2	− 4·6	−13·8	4	28·76
735	θ Leon.....	3·41 A 0	11 10 18·319	+315·44	− 0·48	− 0·41	+15 50 22·83	−1957·5	− 4·5	− 8·5	24 78	28·16 29·07
736	Br. 1549.....	4·87 M 0	11 11 13·025	+319·56	− 0·73	− 0·15	+23 30 16·51	−1959·2	− 4·5	− 1·2	4 5	30·78 29·88
737	BD − 18°, 3141...	6·78 A 0	11 11 34·389	+297·50	+ 0·44	− 0·38	−19 13 42·43	−1959·9	− 4·1	− 1·0	9 8	32·28 32·29
738	Br. 1550.....	5·48 K 0	11 11 56·541	+314·07	− 0·41	− 0·05	+13 43 0·73	−1960·6	− 4·3	− 1·5	7 4	29·22 30·03
739	BD − 6°, 3344....	6·03 F 0	11 13 9·984	+304·08	+ 0·13	− 0·08	− 6 43 30·84	−1962·8	− 4·1	− 1·1	5	29·30 28·11
740	Br. 1552.....	5·44 K 5	11 13 25·808	+308·42	− 0·10	+ 0·36	+ 2 25 22·86	−1963·2	− 4·1	−14·8	5	30·32
741	Br. 1555.....	4·78 A 2	11 15 2·874	+328·07	− 1·36	− 0·49	+38 35 50·58	−1966·0	− 4·2	− 7·7	8 8	27·02 26·65
742	BD − 0°, 2428....	7·0 F 8	11 15 33·633	+306·72	+ 0·00	− 1·53	− 1 14 28·75	−1966·9	− 3·9	−15·9	9	26·71 25·82
743	δ Crat.....	3·82 K 0	11 15 35·290	+300·69	+ 0·33	− 0·86	−14 22 19·46	−1967·0	− 3·8	+19·9	24 50	28·98 29·68
744	σ Leon.....	4·13 A 0	11 17 16·128	+310·08	− 0·19	− 0·63	+ 6 26 26·07	−1969·7	− 3·8	− 1·7	24 62	28·74 29·46
745	Br. 1565.....	5·63 F 2	11 21 41·816	+314·02	− 0·48	− 1·01	+16 52 7·88	−1976·5	− 3·4	− 1·4	6 10	24·90 25·26
746	BD + 52°, 1563...	7·22 F 0	11 21 44·398	+336·27	− 2·30	+ 0·11	+52 32 41·02	−1976·6	− 3·7	− 2·5	5	27·69
747	BD + 27°, 2021...	7·15 A 2	11 21 47·304	+318·66	− 0·83	− 0·24	+27 9 34·42	−1976·7	− 3·4	+ 0·7	11 15	27·18 26·95
748	BD + 9°, 2494....	6·82 K 0	11 22 25·053	+310·76	− 0·25	− 0·03	+ 9 4 20·79	−1977·6	− 3·3	− 2·3	6 8	27·11 27·17
749	BD − 20°, 3420...	6·79 A 0	11 22 49·565	+299·02	+ 0·53	− 0·32	−20 56 37·64	−1978·2	− 3·1	− 1·0	4 5	31·05 30·12
750	CD − 27°, 8121...	6·79 K 0	11 25 54·470	+296·92	+ 0·72	− 0·16	−27 37 1·07	−1982·3	− 2·8	− 0·9	4 3	31·54 31·31
751	BD + 30°, 2163...	6·78 F 0	11 26 6·117	+318·83	− 0·93	− 0·77	+30 22 55·71	−1982·6	− 3·0	−20·5	5 8	29·92 28·43
752	Gr. 1782.....	6·13 A 0	11 26 36·392	+437·70	−18·39	− 6·60	+81 32 25·29	−1983·2	− 4·2	+ 3·1	9	30·91 30·30
753	λ Drac.....	4·06 M 0	11 26 58·155	+359·29	− 5·37	− 0·76	+69 44 42·81	−1983·7	− 3·3	− 2·2	8 11	29·78 30·06
754	Br. 1582.....	5·81 F 5	11 30 31·540	+308·32	− 0·08	− 1·22	+ 3 28 36·76	−1987·9	− 2·5	−10·8	4 5	28·01 27·25
755	BD + 21°, 2331...	6·44 K 0	11 31 9·040	+313·67	− 0·58	− 0·42	+20 51 22·46	−1988·6	− 2·4	− 1·2	4 7	30·51 28·70
756	BD − 3°, 3144....	6·58 K 0	11 31 9·403	+306·12	+ 0·11	− 0·28	− 3 56 44·07	−1988·6	− 2·4	− 4·9	6	30·29 29·64
757	BD + 11°, 2376...	6·69 K 0	11 31 38·740	+310·67	− 0·30	+ 0·40	+11 36 14·82	−1989·1	− 2·4	− 3·5	7	31·72
758	Gr. 1803.....	6·71 K 5	11 33 1·961	+381·15	−10·34	+ 0·20	+78 0 38·52	−1990·6	− 2·8	+ 0·9	15	31·08 30·48
759	υ Leon.....	4·47 K 0	11 33 6·463	+307·17	+ 0·03	+ 0·02	− 0 24 34·02	−1990·7	− 2·2	+ 3·8	22 53	28·88 29·73
760	60 U. Maj.....	6·25 F 2	11 34 32·172	+323·31	− 1·75	− 0·40	+47 15 1·35	−1992·1	− 2·2	− 3·4	5 7	28·32 27·45
761	BD − 15°, 3323...	6·48 M 0	11 36 2·671	+303·23	+ 0·45	− 0·09	−16 12 15·15	−1993·5	− 1·9	− 1·4	5 7	28·05 27·85
762	BD − 7°, 3271....	7·42 G 0	11 36 47·422	+305·38	+ 0·23	− 0·13	− 7 59 22·59	−1994·2	− 1·8	− 1·3	5 8	25·85 25·63
763	BD + 36°, 2216...	7·23 M 3	11 41 39·441	+315·13	− 1·11	− 0·45	+36 18 37·60	−1998·1	− 1·4	+ 1·7	12 14	25·93 25·70
764	χ U. Maj.....	3·85 K 0	11 42 5·750	+318·94	− 1·75	− 1·38	+48 11 43·16	−1998·4	− 1·4	+ 1·9	11 14	26·07 25·98
765	Gr. 1825.....	5·41 K 0	11 42 55·178	+322·06	− 2·38	+ 0·15	+56 2 43·84	−1998·9	− 1·3	− 3·8	10 14	27·58 27·13

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
766	Gr. 1826	6·64 F 0	11 43 5·524	+325·66	− 3·07	− 0·44	+61 49 9·83	−1999·0	− 1·3	− 3·7	12 15	28·20 27·88
767	Br. 1602	5·22 A 0	11 44 3·660	+308·70	− 0·18	− 0·39	+ 8 39 45·43	−1999·6	− 1·1	− 0·6	5 8	27·90 27·55
768	BD + 29°, 2214	7·21 F 2	11 44 31·924	+312·24	− 0·80	− 0·72	+28 50 3·12	−1999·9	− 1·1	− 1·8	8 10	26·75 26·25
769	β Leon	2·23 A 2	11 45 13·896	+309·58	− 0·35	− 3·42	+14 59 28·38	−2000·3	− 1·0	−12·2	13 44	30·07 30·47
770	β Virg	3·80 F 8	11 46 47·371	+307·57	− 0·00	+ 4·95	+ 2 11 14·00	−2001·1	− 0·9	−27·7	25 46	27·23 28·49
771	CD − 26°, 8807	6·53 K 0	11 46 49·562	+303·39	+ 0·79	− 0·67	−26 51 38·61	−2001·2	− 0·8	+ 0·2	4 5	28·53 28·50
772	Pi 11h, 167	5·81 K 0	11 47 12·063	+306·64	+ 0·18	+ 0·01	− 4 54 58·18	−2001·3	− 0·8	− 0·7	6 7	28·30 27·85
773	BD − 11°, 3190	6·22 F 0	11 47 33·478	+305·77	+ 0·37	− 1·48	−11 46 16·38	−2001·5	− 0·8	+ 0·5	4 5	29·06 28·71
774	BD − 20°, 3522	7·49 F 5	11 47 44·187	+304·51	+ 0·63	− 0·02	−21 13 6·45	−2001·6	− 0·8	+ 1·0	6	32·11 32·46
775	BD + 50°, 1871	7·07 K 2	11 48 18·978	+315·50	− 1·84	− 0·45	+50 20 53·87	−2001·9	− 0·7	+ 2·6	9 10	29·43 29·13
776	Pi 11h, 170	6·73 A 2	11 48 54·349	+309·12	− 0·37	+ 0·23	+15 51 17·07	−2002·1	− 0·7	− 6·8	7 9	27·22 26·67
777	γ U. Maj	2·54 A 0	11 49 53·575	+315·42	− 2·11	+ 1·06	+54 6 42·53	−2002·5	− 0·6	+ 0·4	4 6	27·06 26·66
778	η Crat	5·16 A 0	11 52 11·410	+305·91	+ 0·52	− 0·37	−16 43 59·32	−2003·3	− 0·3	− 1·2	9 14	27·40 27·09
779	BD + 41°, 2252	7·20 K 2	11 53 14·508	+310·67	− 1·24	− 0·35	+40 42 23·04	−2003·6	− 0·2	− 0·7	6 4	24·59 24·74
780	Gr. 1841	6·54 F 5	11 53 23·173	+310·60	− 1·24	− 1·47	+40 45 44·64	−2003·6	− 0·2	− 7·1	13	31·16
781	BD + 33°, 2174	6·30 F 0	11 54 16·142	+309·42	− 0·89	− 0·86	+32 41 33·68	−2003·8	− 0·1	− 7·0	9 11	26·27 26·09
782	BD + 20°, 2664	7·06 M 3	11 56 14·319	+308·07	− 0·46	− 0·70	+19 50 15·25	−2004·2	+ 0·1	− 3·1	5 8	27·09 26·28
783	BD − 9°, 3413	5·63 G 5	11 56 53·373	+306·96	+ 0·35	+ 0·83	−10 1 8·93	−2004·3	+ 0·1	−48·3	6 7	28·46 28·32
784	π Virg	4·57 A 3	11 57 1·750	+307·49	− 0·10	+ 0·00	+ 7 1 56·93	−2004·3	+ 0·1	− 3·4	40 101	28·86 29·65
785	BD + 13°, 2482	6·93 A 0	11 57 23·294	+307·63	− 0·25	− 0·27	+12 47 43·37	−2004·3	+ 0·2	− 0·7	7 6	28·46 28·30
786	BD + 65°, 863	7·25 A 3	11 57 46·826	+310·10	− 3·23	− 0·63	+65 21 26·69	−2004·4	+ 0·2	− 4·8	10 13	29·37 29·66
787	Gr. 1850	6·38 F 5	12 0 57·206	+299·27	−20·15	− 5·57	+86 0 10·35	−2004·5	+ 0·5	+ 8·6	9 13	28·75 28·10
788	o Virg	4·24 G 5	12 1 23·243	+307·15	− 0·14	− 1·49	+ 9 8 58·76	−2004·4	+ 0·6	+ 4·2	42 102	28·67 29·16
789	BD + 49°, 2110	7·77 F 5	12 2 18·400	+305·70	− 1·63	− 1·14	+49 34 32·81	−2004·4	+ 0·7	+ 0·9	7	26·72
790	BD − 11°, 3238	6·70 F 0	12 2 56·778	+307·64	+ 0·41	− 0·77	−11 49 24·04	−2004·3	+ 0·7	− 0·8	4 5	29·29 29·10
791	Pi 11h, 234	6·91 F 8	12 3 10·350	+308·08	+ 0·75	− 0·66	−23 20 57·70	−2004·3	+ 0·7	+ 2·6	2 5	31·30 29·68
792	Gr. 1854	7·27 A 2	12 5 40·069	+304·60	− 1·08	− 0·34	+39 3 1·34	−2003·9	+ 1·0	− 6·8	12 16	27·47 27·31
793	Br. 1627	5·74 F 0	12 6 14·044	+306·88	− 0·05	− 1·07	+ 6 13 26·37	−2003·7	+ 1·0	+ 1·5	7 10	24·65 24·74
794	Br. 1628	6·34 A 0	12 6 42·268	+306·07	− 0·35	− 0·14	+17 13 35·51	−2003·6	+ 1·1	− 0·9	12	26·52
795	BD − 1°, 2632	7·12 K 0	12 7 31·216	+307·45	+ 0·17	+ 0·12	− 2 16 49·18	−2003·4	+ 1·2	− 8·2	5 6	26·53 26·15
796	Br. 1630	5·81 K 0	12 8 2·935	+304·96	− 0·61	− 0·34	+26 17 16·98	−2003·2	+ 1·2	− 3·3	5 7	24·87 25·00
797	CD − 25°, 9091	7·40 K 2	12 8 6·328	+309·54	+ 0·84	− 0·05	−25 31 26·61	−2003·2	+ 1·2	− 3·6	8 9	32·56 32·21
798	Br. 1635	5·81 A 2	12 9 36·761	+306·22	− 0·16	− 0·65	+10 40 46·33	−2002·7	+ 1·4	− 2·1	6 7	25·74 26·12
799	γ Corv	2·78 B 8	12 11 56·687	+309·43	+ 0·59	− 1·13	−17 07 30·93	−2001·8	+ 1·6	+ 1·5	12	30·88
800	Gr. 1865	6·55 K 0	12 12 10·692	+284·11	− 4·00	− 0·33	+72 58 6·25	−2001·6	+ 1·5	− 3·9	6 8	29·56 29·99
801	Br. 1641	5·06 K 0	12 12 32·917	+303·97	− 0·53	− 0·21	+24 21 43·97	−2001·5	+ 1·6	− 1·4	5	26·69
802	BD − 15°, 3442	5·96 A 2	12 13 11·026	+309·52	+ 0·57	− 0·35	−16 16 37·38	−2001·2	+ 1·7	− 0·3	8	31·83
803	Br. 1672	6·28 F 0	12 14 31·857	+49·75	+30·81	− 6·36	+88 6 56·30	−2000·4	+ 0·7	+ 5·3	152 153	29·59 28·76
804	BD + 31°, 2350	6·14 *	12 14 44·895	+302·18	− 0·72	+ 0·70	+30 40 4·49	−2000·3	+ 1·8	−13·0	5	27·70
805	Br. 1643	5·92 A 3	12 14 49·504	+307·34	+ 0·14	+ 0·18	− 0 22 13·27	−2000·3	+ 1·9	− 2·1	5 7	29·56 29·22
806	Br. 1644	7·03 K 0	12 15 28·427	+308·63	+ 0·36	+ 0·01	− 8 29 52·20	−1999·9	+ 1·9	− 2·9	7	32·32
807	η Virg	4·00 A 0	12 16 4·017	+307·32	+ 0·15	− 0·42	− 0 15 0·03	−1999·5	+ 2·0	− 2·5	6 19	28·96 29·89
808	Br. 1655	5·72 K 2	12 17 13·212	+291·05	− 2·01	+ 0·52	+58 16 53·61	−1998·8	+ 2·0	− 7·8	5 6	26·71 26·48
809	Br. 1662	4·97 K 0	12 20 23·094	+292·10	− 1·56	+ 0·12	+51 58 39·32	−1996·5	+ 2·3	+ 0·7	7	27·46
810	CD − 27°, 8670	6·34 K 0	12 21 22·467	+313·71	+ 0·95	− 0·06	−27 20 0·40	−1995·8	+ 2·6	− 1·5	5 6	27·95 27·35

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 804. F 5 + A 2.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
811	Gr. 1888	6·37 G 5	12 21 36·840	+281·23	− 2·40	− 0·29	+64 13 5·49	−1995·6	+ 2·4	− 0·2	12 16	27·24 27·16
812	BD + 18°, 2611	7·52 K 0	12 23 46·353	+302·72	− 0·31	− 0·10	+18 14 59·79	−1 93·7	+ 2·7	− 3·7	4 5	26·07 25·70
813	Gr. 1894	6·85 *	12 23 52·537	+294·87	− 1·06	− 0·23	+41 46 12·51	−1993·6	+ 2·7	− 1·3	7 8	25·98 26·15
814	BD + 26°, 2353	6·69 A 3	12 24 59·834	+300·08	− 0·53	− 0·14	+26 18 50·89	−1992·6	+ 2·7	− 2·6	1 2	29·36 27·33
815	Br. 1673	5·38 A 0	12 25 10·018	+300·03	− 0·53	− 0·19	+26 19 39·84	−1992·4	+ 2·8	− 2·5	4 6	27·84 27·69
816	δ Corv	3·11 A 0	12 25 58·737	+311·64	+ 0·61	− 1·46	−16 5 52·96	−1991·6	+ 3·0	−14·5	20 51	28·16 29·40
817	Pi 12h, 105	5·87 K 5	12 26 21·572	+313·88	+ 0·83	− 0·16	−23 16 54·96	−1991·2	+ 3·0	− 1·1	7 8	29·45 29·32
818	Pi 12h, 108	7·06 K 0	12 26 59·153	+308·28	+ 0·26	− 0·48	− 3 38 47·84	−1990·6	+ 3·1	− 0·1	4 7	30·32 30·02
819	BD + 8°, 2609	6·16 K 5	12 27 32·696	+305·02	− 0·03	− 0·20	+ 8 1 5·43	−1990·0	+ 3·1	+ 0·3	7 9	27·44 26·96
820	Br. 1682	6·46 K 0	12 29 15·071	+304·06	− 0·10	− 0·38	+10 42 33·88	−1988·2	+ 3·2	− 0·3	8	25·81
821	BD − 12°, 3659	5·76 G 5	12 29 40·655	+311·08	+ 0·51	− 0·18	−12 25 3·05	−1987·7	+ 3·4	+ 5·0	11 13	31·80 31·27
822	Gr. 1904	6·72 K 0	12 29 50·556	+293·49	− 0·89	− 0·65	+38 28 57·74	−1987·5	+ 3·2	− 1·7	6 7	28·32 28·33
823	β Corv	2·84 G 5	12 30 26·572	+314·79	+ 0·83	+ 0·03	−22 58 55·90	−1986·8	+ 3·5	− 5·9	5	30·12
824	24 Coma	5·18 K 0	12 31 22·057	+301·08	− 0·30	− 0·05	+18 47 23·10	−1985·7	+ 3·4	+ 1·8	27 72	28·75 29·01
825	BD + 46°, 1797	7·50 K 5	12 32 17·915	+287·71	− 1·16	− 0·12	+46 11 37·20	−1984·6	+ 3·4	+ 0·9	4	27·76
826	25 Virg	5·90 A O	12 32 55·390	+309·10	+ 0·33	− 0·21	− 5 25 7·33	−1983·8	+ 3·6	− 2·3	4 5	26·80 27·11
827	Pi 12h, 142	6·02 M 0	12 34 32·760	+306·49	+ 0·13	− 0·52	+ 2 16 2·39	−1981·7	+ 3·8	− 2·6	7 10	29·05 28·33
828	BD − 17°, 3668	6·08 F 0	12 34 49·408	+313·79	+ 0·68	− 0·82	−17 50 17·90	−1981·4	+ 3·9	+ 1·1	4 7	29·83 29·06
829	χ Virg	4·78 K 0	12 35 22·331	+310·02	+ 0·39	− 0·53	− 7 34 58·79	−1980·6	+ 3·9	− 3·2	23 59	29·10 29·81
830	Br. 1695	5·51 K 0	12 35 23·442	+299·19	− 0·36	− 0·60	+21 28 29·26	−1980·6	+ 3·8	− 1·7	7 6	26·58 26·46
831	BD + 34°, 2344	6·62 K 0	12 38 40·283	+292·08	− 0·69	− 1·79	+34 6 6·58	−1976·0	+ 4·0	−11·6	7 11	24·69 24·82
832	BD − 2°, 3567	6·65 A 2	12 40 20·097	+308·27	+ 0·27	− 0·49	− 2 25 54·76	−1973·5	+ 4·4	− 1·2	9 15	25·17 25·30
833	Gr. 1927	6·26 A 0	12 42 31·517	+151·06	+ 0·40	+ 1·15	+81 1 54·54	−1970·1	+ 2·5	− 4·6	12 15	27·14 26·95
834	CD − 24°, 10540	6·29 B 9	12 43 54·146	+318·84	+ 0·93	− 0·38	−24 26 34·35	−1967·8	+ 4·8	+ 3·0	6 8	25·47 25·56
835	CD − 26°, 9340	5·80 G 5	12 44 26·033	+320·50	+ 1·03	− 1·07	−27 11 13·84	−1966·9	+ 4·9	− 7·1	8 7	26·82 26·89
836	Br. 1711	5·83 A 0	12 45 38·169	+293·25	− 0·48	− 0·73	+27 57 37·82	−1964·9	+ 4·6	+ 1·5	3	28·21
837	31 Coma	5·07 G 0	12 48 2·765	+292·53	− 0·47	− 0·12	+27 56 54·63	−1960·6	+ 4·9	− 1·6	2 2	27·20 26·72
838	Br. 1716	6·53 K 5	12 48 28·415	+298·44	− 0·20	− 0·02	+17 28 53·66	−1959·8	+ 5·0	− 2·2	4 5	28·83 27·69
839	32² H Caml	5·28 A 2	12 48 33·814	+ 47·69	+ 9·58	− 1·80	+83 49 13·80	−1959·6	+ 1·1	+ 1·6	160 162	29·36 28·67
840	BD + 17°, 2553	6·92 F 8	12 48 38·914	+298·39	− 0·21	+ 0·22	+17 30 58·60	−1959·4	+ 5·0	− 4·3	1	30·25
841	BD − 17°, 3726	6·84 A 0	12 50 2·578	+316·48	+ 0·72	− 0·28	−17 37 50·82	−1956·9	+ 5·4	− 0·4	5 5	32·11 31·32
842	Br. 1720	6·34 A 3	12 50 3·898	+300·69	− 0·09	+ 0·34	+12 49 32·89	−1956·8	+ 5·2	− 3·2	5 4	30·29 30·04
843	BD + 36°, 2314	8·14 K 0	12 50 10·151	+286·08	− 0·68	− 0·17	+36 8 42·02	−1956·6	+ 4·9	− 8·2	7 8	32·07 32·24
844	ε U. Maj	1·68 A 0	12 50 44·141	+263·17	− 1·32	+ 1·36	+56 22 0·36	−1955·6	+ 4·6	− 1·1	8 9	32·96 32·79
845	BD + 0°, 3002	6·88 K 0	12 51 48·110	+307·04	+ 0·22	− 0·14	+ 0 27 41·60	−1953·5	+ 5·4	− 0·8	4	29·29
846	δ Virg	3·66 M 0	12 51 49·279	+305·29	+ 0·14	− 3·13	+ 3 48 16·88	−1953·4	+ 5·4	− 6·0	8 15	29·67 29·43
847	BD − 14°, 3605	6·10 A 0	12 51 56·446	+315·28	+ 0·64	− 0·07	−14 55 14·69	−1953·2	+ 5·6	− 0·7	7 9	32·05 31·23
848	α C. Ven	2·90 A 0	12 52 31·110	+282·94	− 0·74	− 1·99	+38 43 24·14	−1952·1	+ 5·1	+ 4·8	4	31·34
849	Br. 1726	6·01 A 2	12 53 0·542	+264·32	− 1·22	− 0·88	+54 30 18·68	−1951·1	+ 4·8	− 0·7	10 11	27·49 27·38
850	Gr. 1938	6·95 A 0	12 53 10·910	+277·65	− 0·89	+ 0·03	+43 57 26·97	−1950·7	+ 5·1	− 0·3	4	26·61
851	BD − 6°, 3705	7·70 K 0	12 54 42·554	+310·90	+ 0·41	− 0·18	− 6 32 36·86	−1947·6	+ 5·8	+ 0·7	4 5	29·57 29·73
852	Br. 1729	5·87 A 0	12 55 47·505	+309·20	+ 0·33	− 0·24	− 3 24 27·76	−1945·4	+ 5·8	+ 0·4	4 6	27·06 26·64
853	BD + 76°, 473	6·19 K 0	12 56 34·285	+177·51	− 0·62	+ 0·15	+75 52 36·11	−1943·7	+ 3·6	+ 0·6	8 9	30·45 30·56
854	BD + 32°, 2311	6·72 G 5	12 56 50·833	+286·63	− 0·54	+ 0·09	+32 10 59·91	−1943·1	+ 5·5	− 1·7	5 7	29·33 28·62
855	Br. 1736	4·89 F 0	12 57 30·918	+256·63	− 1·22	+ 1·38	+56 46 13·15	−1941·7	+ 5·1	− 1·6	4 5	28·80 29·12

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 813. F 5 + A 3.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″			
856	ε Virg.	2·95 K 0	12 58 26·518	+300·51	− 0·02	− 1·86	+11 21 42·71	−1939·6	+ 5·9	+ 1·6	3 6	27·91	26·42
857	BD + 23°, 2530	6·87 A 0	12 59 20·175	+292·73	− 0·30	− 0·28	+23 2 26·56	−1937·7	+ 5·9	− 2·7	5	26·50	
858	BD − 13°, 3651	7·23 K 5	13 1 54·410	+315·98	+ 0·63	− 0·10	−13 42 35·96	−1931·8	+ 6·6	− 1·8	4 5	25·01	25·07
859	Gr. 1956	5·72 K 0	13 2 29·922	+270·44	− 0·85	− 0·15	+45 40 9·57	−1930·4	+ 5·7	+ 2·4	4 5	30·13	30·18
860	Br. 1743	4·90 K 5	13 3 34·828	+287·80	− 0·40	+ 0·23	+28 1 36·31	−1927·8	+ 6·2	− 7·8	8 9	26·41	26·17
861	BD − 22°, 3513	6·76 K 0	13 4 37·235	+322·84	+ 0·92	− 0·82	−22 42 19·81	−1925·3	+ 6·9	− 4·9	4	29·55	
862	ψ Hyda	5·11 K 0	13 5 0·531	+322·94	+ 0·93	− 0·17	−22 43 2·55	−1924·4	+ 7·0	− 4·6	4 6	29·55	30·21
863	BD + 6°, 2697	6·91 G 0	13 5 2·808	+303·60	+ 0·13	+ 0·56	+ 5 37 14·48	−1924·3	+ 6·6	−68·8	5 5	26·68	27·09
864	θ Virg.	4·46 A 0	13 6 3·820	+310·70	+ 0·40	− 0·24	− 5 8 20·26	−1921·8	+ 6·8	− 3·9	23 64	29·21	28·89
865	BD + 17°, 2595	6·18 K 0	13 6 6·559	+295·48	− 0·14	− 0·47	+17 14 54·08	−1921·7	+ 6·5	− 1·9	5 6	28·91	28·50
866	Gr. 1965	6·49 A 0	13 6 56·322	+232·96	− 1·14	− 0·42	+62 37 41·90	−1919·6	+ 5·3	− 1·4	9	30·90	
867	CD − 25°, 9653	6·48 A 3	13 7 34·120	+326·35	+ 1·06	− 0·54	−26 09 11·48	−1918·0	+ 7·3	− 0·4	7 6	30·88	30·16
868	β Coma	4·32 G 0	13 8 22·398	+286·17	− 0·38	− 6·04	+28 15 29·52	−1915·9	+ 6·5	+87·7	11 10	25·30	25·61
869	Gr. 1974	6·43 A 0	13 11 22·950	+171·67	− 0·24	+ 0·49	+73 11 46·53	−1908·0	+ 4·2	− 3·1	10 15	28·42	28·26
870	Gr. 1977	6·32 G 5	13 11 43·740	+ 51·32	+ 6·22	− 0·36	+80 52 4·98	−1907·1	+ 1·6	+ 0·8	10 11	30·01	30·04
871	BD + 20°, 2814	6·29 A 3	13 12 53·920	+291·92	− 0·18	− 0·84	+20 10 48·84	−1903·9	+ 7·1	+ 1·7	6 7	26·96	26·57
872	Br. 1760	5·22 G 0	13 13 2·992	+300·04	+ 0·05	− 2·27	+ 9 48 56·84	−1903·5	+ 7·3	+18·5	5 6	27·77	27·36
873	BD − 7°, 3582	7·06 F 8	13 13 48·547	+313·48	+ 0·50	+ 0·10	− 8 20 13·95	−1901·4	+ 7·6	− 5·7	5 6	30·14	29·84
874	σ Virg.	5·01 M 0	13 13 48·938	+302·94	+ 0·15	− 0·07	+ 5 51 52·65	−1901·4	+ 7·4	+ 1·0	27 79	28·54	29·22
875	BD + 4°, 2721	6·56 A 0	13 15 3·060	+304·21	+ 0·19	− 0·34	+ 4 41 56·29	−1898·0	+ 7·5	− 1·7	5 7	28·12	27·46
876	BD + 35°, 2435	5·96 A 5	13 15 37·337	+276·37	− 0·51	− 0·24	+35 31 17·29	−1896·3	+ 6·9	+ 0·5	6 7	27·42	26·97
877	23 C. Ven.	5·69 K 0	13 16 57·371	+269·61	− 0·61	− 0·49	+40 32 37·84	−1892·5	+ 6·9	− 1·2	9 11	24·74	25·13
878	BD − 20°, 3818	6·60 K 0	13 19 53·393	+324·38	+ 0·88	− 0·22	−20 31 58·55	−1883·9	+ 8·5	− 1·5	5 7	25·88	25·87
879	ζ U. Maj.	2·40 A 2	13 20 54·506	+240·51	− 0·83	+ 1·46	+55 19 0·08	−1880·9	+ 6·5	− 2·8	4	27·80	
880	α Virg.	1·21 B 2	13 21 14·305	+316·10	+ 0·58	− 0·28	−10 46 12·72	−1879·9	+ 8·4	− 3·5	24 53	28·86	30·08
881	BD + 16°, 2508	7·00 K 0	13 21 59·897	+293·90	− 0·06	− 0·50	+15 57 14·17	−1877·5	+ 7·9	− 1·7	8 10	26·15	26·20
882	BD − 0°, 2686	6·01 A 3	13 22 20·738	+307·94	+ 0·33	− 0·75	− 0 48 10·55	−1876·5	+ 8·3	− 0·1	6 11	29·54	28·47
883	BD − 11°, 3516	5·59 K 2	13 22 45·123	+317·59	+ 0·63	− 0·92	−12 19 4·53	−1875·2	+ 8·6	− 2·4	5 6	29·15	29·02
884	BD + 31°, 2493	7·12 K 2	13 24 50·671	+277·61	− 0·37	− 0·11	+31 32 14·30	−1868·7	+ 7·7	+ 0·4	8 10	24·92	24·88
885	BD + 53°, 1622	6·16 F 0	13 24 58·754	+242·71	− 0·75	− 1·27	+53 8 2·98	−1868·3	+ 6·8	− 1·6	5 7	27·14	27·36
886	BD + 7°, 2655	6·29 K 5	13 26 14·346	+300·76	+ 0·14	+ 0·05	+ 7 33 57·08	−1864·2	+ 8·5	− 0·4	8 10	26·70	26·64
887	BD + 27°, 2262	7·15 A 5	13 27 29·165	+282·16	− 0·26	+ 0·18	+26 46 35·00	−1860·2	+ 8·1	− 0·6	5 10	26·28	26·44
888	CD − 28°, 10128	5·67 A 0	13 28 24·871	+334·36	+ 1·19	− 0·80	−28 18 24·46	−1857·1	+ 9·6	− 3·5	6	31·32	
889	Br. 1786	5·43 G 5	13 29 0·811	+316·00	+ 0·57	− 0·23	− 9 46 44·55	−1855·2	+ 9·1	− 4·3	3 7	26·67	26·78
890	ζ Virg.	3·44 A 2	13 30 52·075	+307·47	+ 0·33	− 1·90	+ 0 12 46·44	−1849·0	+ 9·0	+ 3·4	15 59	28·83	29·35
891	Br. 1791	4·63 A 3	13 31 23·347	+246·74	− 0·63	− 1·28	+49 23 56·96	−1847·2	+ 7·4	+ 1·9	8 9	31·34	31·45
892	BD + 44°, 2285	6·63 A 5	13 32 2·558	+255·80	− 0·56	− 0·18	+44 34 47·82	−1845·0	+ 7·7	+ 0·8	4 7	28·07	26·89
893	BD + 3°, 2799	6·73 K 0	13 33 55·357	+304·71	+ 0·27	− 0·10	+ 2 45 51·08	−1838·5	+ 9·2	− 3·6	3 6	27·67	27·35
894	BD + 23°, 2591	7·05 G 5	13 34 28·090	+284·65	− 0·61	− 1·01	+22 54 37·29	−1836·6	+ 8·7	− 9·6	9 13	31·70	30·45
895	BD + 11°, 2589	5·54 F 2	13 35 52·610	+296·60	+ 0·09	− 0·78	+11 7 36·14	−1831·6	+ 9·2	− 2·0	7 7	27·06	27·36
896	BD − 15°, 3715	6·86 K 2	13 35 55·843	+322·92	+ 0·76	− 0·04	−16 3 58·73	−1831·4	+10·0	− 2·4	6 7	29·20	28·10
897	Pi 13h, 159	6·42 A 0	13 37 22·191	+330·74	+ 1·00	− 0·10	−23 4 15·21	−1826·3	+10·3	− 0·3	5 6	29·55	29·35
898	Br. 1802	4·75 M 0	13 37 53·658	+228·04	− 0·59	− 0·26	+55 3 38·58	−1824·4	+ 7·3	− 1·4	8 10	29·35	27·53
899	Pi 13h, 184	5·70 A 0	13 39 9·874	+186·01	− 0·25	+ 0·83	+65 12 2·55	−1819·7	+ 6·1	− 1·9	9 11	30·13	29·73
900	BD + 35°, 2474	5·98 K 0	13 39 22·897	+267·43	− 0·36	+ 0·15	+35 21 58·79	−1818·9	+ 8·6	+ 0·4	9 12	25 8(	25·88

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
901	Pi 13h, 174.....	6·47 A 0	13 39 59·883	+312·34	+ 0·47	− 0·36	− 5 7 18·02	−1816·7	+10·0	− 2·5	6 8	28·17 28·35
902	BD − 11°, 3591...	5·82 K 0	13 41 56·274	+319·56	+ 0·65	− 0·14	−12 3 4·62	−1809·4	+10·4	+ 0·0	8	28·06
903	Br. 1808.....	5·91 F 5	13 43 14·318	+278·81	− 0·18	− 0·14	+26 4 40·90	−1804·5	+ 9·2	− 6·4	6	26·64
904	τ Boot.....	4·51 F 5	13 43 41·735	+288·49	− 0·03	− 3·38	+17 49 48·33	−1802·8	+ 9·6	+ 3·0	17 48	27·33 28·09
905	Gr. 2063.....	6·16 G 5	13 44 23·917	−180·60	+24·66	+ 1·81	+83 7 44·38	−1800·1	− 5·4	− 4·4	12 13	32·00 31·84
906	η U. Maj.....	1·91 B 3	13 44 35·165	+237·87	− 0·50	− 1·25	+49 41 14·00	−1799·4	+ 8·0	− 1·8	4 5	28·30 28·32
907	CD − 28°, 10277..	6·10 B 9	13 45 51·021	+339·89	+ 1·23	− 0·38	−28 42 30·67	−1794·4	+11·4	− 2·9	5 6	29·13 29·35
908	BD + 9°, 2814....	6·54 A 0	13 46 0·565	+298·07	+ 0·16	− 0·18	+ 8 46 49·58	−1793·8	+10·1	+ 0·0	4	26·32
909	BD + 19°, 2719...	6·72 F 0	13 46 31·390	+286·65	− 0·04	− 0·36	+19 0 4·39	−1791·8	+ 9·7	− 3·3	6 7	26·48 26·46
910	Gr. 2055.....	6·05 K 0	13 47 19·045	+194·50	− 0·28	+ 0·95	+61 51 45·95	−1788·7	+ 6·8	−10·4	9 10	29·21 28·85
911	BD + 40°, 2701...	7·82 M 3	13 48 35·128	+256·05	− 0·38	− 0·04	+40 2 23·74	−1783·7	+ 8·9	− 2·5	11 14	30·00 29·82
912	η Boot.....	2·80 G 0	13 51 6·726	+286·11	− 0·02	− 0·44	+18 46 21·57	−1773·5	+10·1	−36·5	21 60	28·01 29·30
913	BD − 8°, 3667...	6·92 K 5	13 51 49·595	+317·42	+ 0·59	− 0·19	− 9 11 33·44	−1770·6	+11·2	− 0·8	4 5	27·55 27·10
914	BD + 14°, 2680...	6·15 F 5	13 52 12·920	+291·12	+ 0·06	− 2·01	+14 25 23·89	−1768·9	+10·4	− 0·5	7 11	30·07 29·38
915	BD + 32°, 2411...	6·29 F 2	13 52 50·788	+267·19	− 0·24	− 1·04	+32 23 53·04	−1766·4	+ 9·6	+ 4·2	7 7	26·92 26·76
916	Br. 1828.....	5·42 A 0	13 55 8·013	+281·20	− 0·07	− 0·08	+22 3 41·73	−1756·8	+10·2	− 5·2	7 9	26·46 26·33
917	Pi 13h, 269.....	6·30 F 5	13 55 55·913	+310·88	+ 0·44	− 0·19	− 3 11 5·68	−1753·4	+11·4	− 7·0	4	26·59
918	τ Virg.....	4·34 A 2	13 57 49·623	+305·09	+ 0·33	+ 0·10	+ 1 54 24·93	−1745·3	+11·3	− 2·6	38 94	28·92 29·54
919	BD − 16°, 3785...	6·53 K 0	13 58 58·805	+327·56	+ 0·82	− 1·29	−17 0 22·14	−1740·4	+12·2	+ 0·1	5 7	25·72 25·60
920	BD − 21°, 3824...	6·21 F 2	13 59 41·745	+334·30	+ 0·98	− 0·04	−22 3 42·03	−1737·2	+12·5	− 1·3	3 4	29·64 29·81
921	BD + 5°, 2836....	6·28 F 2	14 0 9·713	+301·12	+ 0·26	− 0·12	+ 5 15 38·69	−1735·2	+11·4	− 0·7	6 7	25·52 25·49
922	Pi 13h, 296.....	6·05 A 0	14 0 12·282	+223·66	− 0·34	− 0·22	+51 19 55·17	−1735·0	+ 8·5	− 0·9	5 7	29·15 28·66
923	Pi 13h, 286.....	6·36 K 0	14 0 23·080	+324·75	+ 0·75	− 0·26	−14 36 42·67	−1734·2	+12·2	− 2·7	5 7	28·79 29·69
924	π Hyda.....	3·48 K 0	14 2 5·678	+340·86	+ 1·15	+ 0·32	−26 19 17·75	−1726·7	+13·0	−15·0	8 7	25·67 25·89
925	α Drac.....	3·64 A 0	14 2 21·350	+163·20	+ 0·24	− 0·82	+64 44 2·02	−1725·5	+ 6·4	+ 1·4	14 17	27·50 27·48
926	BD + 18°, 2824...	7·62 K 0	14 2 59·989	+284·72	+ 0·02	− 0·24	+18 16 9·73	−1722·7	+11·0	− 0·7	5 8	25·32 25·45
927	BD + 39°, 2720...	7·90 K 0	14 3 17·629	+252·28	− 0·27	+ 0·10	+38 46 28·55	−1721·3	+ 9·8	− 1·2	10 12	25·58 25·80
928	Br. 1838.....	5·44 M 0	14 5 29·148	+224·92	− 0·30	− 0·66	+49 48 43·66	−1711·4	+ 8·9	+ 5·5	7 8	26·87 26·68
929	CD − 30°, 11209..	6·78 A 2	14 5 51·485	+347·98	+ 1·31	− 0·35	−30 15 58·49	−1709·7	+13·6	− 2·3	4 5	29·34 28·94
930	Br. 1837.....	5·25 K 0	14 8 27·821	+343·34	+ 1·17	− 0·10	−26 54 31·74	−1697·7	+13·7	− 4·2	6 8	26·13 25·92
931	κ Virg.....	4·31 K 0	14 8 53·460	+319·75	+ 0·62	+ 0·03	− 9 55 30·03	−1695·7	+12·8	+13·4	45 97	28·36 29·36
932	Gr. 2091.....	5·36 M 0	14 10 39·970	+111·41	+ 1·37	− 0·48	+69 47 2·82	−1687·4	+ 4·7	− 5·0	9 10	30·58 30·27
933	BD + 4°, 2841....	6·62 M 0	14 11 6·041	+302·62	+ 0·31	− 0·32	+ 3 41 8·25	−1685·4	+12·3	− 2·0	7 8	25·93 26·00
934	BD + 22°, 2678...	6·40 A 2	14 11 12·411	+277·70	− 0·02	+ 0·28	+22 13 21·96	−1684·9	+11·3	− 1·0	5 8	29·17 29·15
935	ι Virg.....	4·16 F 5	14 12 4·699	+314·48	+ 0·52	− 0·08	− 5 38 36·66	−1680·7	+12·8	−42·9	8 10	26·85 26·54
936	α Boot.....	0·24 K 0	14 12 14·004	+281·36	+ 0·03	− 7·79	+19 34 9·88	−1680·0	+11·5	−200·2	21 70	29·44 30·21
937	λ Boot.....	4·26 A 0	14 13 31·870	+229·98	− 0·24	− 1·78	+46 25 56·43	−1673·8	+ 9·6	+15·4	5 5	26·76 26·98
938	BD + 57°, 1498...	6·60 F 8	14 13 34·414	+193·86	− 0·09	+ 0·07	+57 2 18·46	−1673·6	+ 8·1	−10·5	3 4	27·39 27·90
939	BD + 57°, 1499...	7·03 F 0	14 13 43·497	+193·65	− 0·08	− 0·45	+57 3 34·83	−1672·8	+ 8·2	− 1·2	1	28·35
940	BD − 6°, 3964....	6·50 G 0	14 14 1·577	+316·59	+ 0·56	+ 1·68	− 7 11 28·98	−1671·4	+13·1	−24·7	6 5	27·16 26·94
941	BD − 18°, 3789...	5·74 A 0	14 14 29·075	+331·85	+ 0·87	− 0·45	−18 22 10·03	−1669·2	+13·7	− 4·6	4 5	28·12 28·39
942	λ Virg.....	4·60 A 2	14 15 2·835	+324·46	+ 0·71	− 0·13	−13 1 35·03	−1666·4	+13·5	+ 2·4	28 59	28·39 29·36
943	BD + 13°, 2782...	5·31 F 0	14 15 38·404	+289·59	+ 0·14	+ 0·71	+13 20 58·59	−1663·5	+12·1	− 3·7	5	27·68
944	Gr. 2098.....	7·20 K 0	14 15 57·568	+239·18	− 0·22	+ 0·32	+42 21 3·30	−1662·0	+10·1	− 7·4	4 8	28·91 28·04
945	BD + 31°, 2605...	6·34 A 2	14 16 51·770	+262·53	− 0·12	− 0·12	+30 46 22·12	−1657·5	+11·1	− 0·7	6 9	26·69 26·23

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
946	BD + 8°, 2857....	5·74 A 0	14 20 18·919	+295·69	+ 0·23	+ 0·01	+ 8 35 2·66	−1640·4	+12·7	− 3·1	8 11	25·16 25·32
947	Pi 14h, 68.....	5·39 K 0	14 20 31·505	+342·27	+ 1·07	− 0·44	−24 27 59·77	−1639·3	+14·7	− 2·7	11 14	27·33 27·11
948	BD − 12°, 4042...	6·59 K 0	14 21 13·565	+325·13	+ 0·71	− 0·37	−13 0 52·15	−1635·8	+14·0	+ 0·4	4 6	27·90 27·42
949	θ Boot.....	4·06 F 8	14 22 38·479	+206·86	− 0·12	− 2·60	+52 11 47·54	−1628·6	+ 9·1	−40·4	6 7	28·84 28·49
950	φ Virg.....	4·99 K 0	14 24 20·072	+309·88	+ 0·44	− 0·94	− 1 53 32·89	−1619·9	+13·6	− 0·8	41 110	27·82 29·19
951	CD − 28°, 10724..	7·02 F 8	14 24 46·093	+350·62	+ 1·24	+ 0·11	−28 46 45·16	−1617·7	+15·4	− 0·9	1 2	30·25 28·32
952	BD + 36°, 2495...	6·19 K 0	14 25 10·021	+248·68	− 0·14	− 0·24	+36 31 54·17	−1615·6	+11·1	− 1·0	5 7	28·36 28·20
953	BD + 28°, 2332...	6·95 A 0	14 25 15·112	+264·09	− 0·06	+ 0·11	+28 37 30·60	−1615·2	+11·7	+ 0·2	4 6	29·10 28·20
954	ρ Boot.....	3·78 K 0	14 28 35·794	+259·36	− 0·07	− 0·78	+30 41 59·56	−1597·7	+11·8	+11·5	10 9	24·97 24·94
955	γ Boot.....	3·00 F 0	14 29 3·377	+242·61	− 0·13	− 0·98	+38 38 8·89	−1595·3	+11·0	+14·6	6 9	27·18 26·27
956	BD + 81°, 482....	7·10 G 5	14 31 59·665	−220·68	+18·92	− 3·96	+81 8 33·67	−1579·6	− 9·6	−12·9	12 13	30·29 30·07
957	Gr. 2132.....	6·63 F 5	14 32 0·601	+124·87	+ 0·94	+ 0·94	+65 43 21·15	−1579·5	+ 5·9	+ 4·1	10 11	28·15 28·48
958	BD + 50°, 2095...	5·90 K 5	14 32 2·252	+210·27	− 0·08	− 0·48	+49 41 40·91	−1579·3	+ 9·8	+ 4·4	5 6	25·00 25·23
959	BD + 23°, 2710...	6·48 K 0	14 32 43·382	+271·23	+ 0·02	− 0·11	+23 34 34·04	−1575·6	+12·6	+ 1·5	9 11	25·37 25·74
960	Pi 14h, 127.....	6·24 F 8	14 32 59·978	+324·85	+ 0·68	− 5·97	−11 59 13·92	−1574·1	+15·0	+36·0	4 6	27·34 26·85
961	BD + 2°, 2844....	6·62 F 8	14 33 40·759	+303·50	+ 0·36	− 0·25	+ 2 36 12·98	−1570·5	+14·1	− 7·2	7 9	25·21 25·36
962	Pi 14h, 156.....	5·52 A 0	14 35 52·372	+190·12	+ 0·05	+ 0·15	+54 20 49·04	−1558·5	+ 9·0	− 2·4	9 12	24·76 24·91
963	Br. 1879.....	5·63 G 5	14 38 7·178	+289·23	+ 0·20	− 1·08	+11 58 59·22	−1546·0	+13·7	−12·3	6 10	26·36 26·38
964	BD − 18°, 3882...	7·00 K 0	14 38 32·303	+336·62	+ 0·88	− 0·35	−18 59 33·96	−1543·7	+16·0	+ 2·6	6 8	28·33 28·37
965	μ Virg.....	3·95 F 5	14 39 6·288	+315·26	+ 0·52	+ 0·71	− 5 19 59·70	−1540·5	+15·0	−32·2	36 102	28·29 29·39
966	BD − 7°, 3897....	6·60 F 5	14 40 14·801	+319·27	+ 0·58	− 1·38	− 7 56 10·15	−1534·1	+15·3	+ 6·4	5 6	27·33 26·82
967	ε Boot.....	2·70 K 0	14 41 42·590	+262·38	+ 0·01	− 0·37	+27 23 22·94	−1525·9	+12·7	+ 1·4	4 5	29·11 28·56
968	BD − 22°, 3844...	5·91 K 0	14 41 48·108	+343·79	+ 1·00	+ 0·16	−22 50 11·14	−1525·3	+16·6	− 6·5	7 8	26·34
969	BD + 33°, 2489...	6·47 M 0	14 42 5·342	+250·67	− 0·04	+ 0·31	+33 6 18·71	−1523·7	+12·2	− 8·4	3 6	28·10 27·42
970	109 Virg.....	3·76 A 0	14 42 27·247	+303·93	+ 0·37	− 0·76	+ 2 12 29·35	−1521·6	+14·7	− 3·6	32 92	27·70 28·98
971	BD + 15°, 2758...	6·10 M 3	14 42 33·728	+283·23	+ 0·16	− 0·58	+15 26 46·06	−1521·0	+13·8	+ 0·9	6 7	29·57 29·67
972	Br. 1886.....	5·39 G 5	14 43 21·759	+349·48	+ 1·10	+ 0·31	−25 46 26·77	−1516·4	+17·0	− 1·2	3 4	30·37 30·39
973	BD − 0°, 2886....	6·06 A 0	14 45 2·706	+308·11	+ 0·43	− 0·06	− 0 32 11·21	−1506·8	+15·1	+ 1·3	5 6	29·54 29·01
974	α^1 Libr.....	5·33 F 5	14 46 32·077	+332·21	+ 0·77	− 0·69	−15 41 9·71	−1498·2	+16·4	− 7·5	2 4	31·45 31·46
975	α^2 Libr.....	2·90 A 3	14 46 43·460	+332·31	+ 0·78	− 0·74	−15 43 51·44	−1497·0	+16·4	− 7·4	30 65	28·18 28·94
976	Pi 14h, 193.....	5·66 A 2	14 46 44·562	+258·17	+ 0·01	+ 0·16	+28 55 32·84	−1496·9	+12·8	− 0·5	6 8	25·84 25·98
977	Gr. 2154.....	5·50 K 0	14 47 31·890	+238·63	− 0·04	− 1·79	+37 34 45·11	−1492·3	+11·9	+ 8·8	7 11	26·48 26·05
978	CD − 30°, 11780..	6·43 G 0	14 48 4·485	+359·49	+ 1·27	− 2·56	−30 16 7·80	−1489·2	+17·9	− 3·3	4	29·56
979	BD + 6°, 2957....	6·69 K 0	14 49 57·025	+296·92	+ 0·30	− 0·20	+ 6 32 50·26	−1478·1	+14·9	+ 0·0	4	27·87
980	β U. Min.....	2·24 K 5	14 50 54·211	−18·81	+ 4·91	− 0·79	+74 27 43·14	−1472·5	− 0·6	+ 0·7	14 17	27·42 27·36
981	BD + 41°, 2539...	7·21 A 2	14 53 10·042	+226·39	− 0·02	− 0·06	+41 26 16·60	−1459·0	+11·6	+ 3·6	5 8	25·14 25·10
982	BD + 22°, 2764...	6·24 A 0	14 53 40·738	+270·44	+ 0·09	− 0·15	+21 51 25·37	−1455·9	+13·9	− 3·2	6 10	26·77 26·61
983	Br. 1908.....	5·71 K 0	14 53 42·337	+307·07	+ 0·41	+ 0·43	+ 0 8 1·97	−1455·8	+15·7	− 3·1	7 8	26·22 26·25
984	Pi 14h, 223.....	6·77 K 0	14 53 53·350	+335·50	+ 0·80	− 0·37	−17 3 50·20	−1454·7	+17·1	− 0·7	4	28·83
985	BD + 14°, 2812...	6·77 K 2	14 54 43·369	+283·69	+ 0·19	− 0·25	+14 20 13·63	−1449·6	+14·6	+ 0·1	5 6	27·78 27·36
986	Gr. 2196.....	5·73 G 0	14 55 16·701	−427·27	+32·91	+ 8·60	+82 49 14·24	−1446·3	−21·3	−23·2	14 17	31·07 30·67
987	δ Libr.....	* A 0	14 56 57·700	+320·75	+ 0·58	− 0·44	− 8 13 19·73	−1436·0	+16·6	− 1·2	19 40	26·96 27·49
988	BD − 7°, 3943....	6·85 G 5	14 58 3·571	+320·53	+ 0·58	− 0·24	− 8 2 59·59	−1429·3	+16·7	+ 2·4	3 2	27·69 27·38
989	β Boot.....	3·63 G 5	14 59 7·129	+226·36	+ 0·00	− 0·39	+40 41 8·36	−1422·8	+11·9	− 3·9	6 9	29·89 29·74
990	BD + 72°, 664....	6·66 G 0	15 0 19·623	+ 15·03	+ 3·42	− 8·66	+72 3 30·85	−1415·3	+ 1·1	+ 9·1	7 9	31·16 29·87

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 987. $4^m.8$ to $5^m.9$.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
991	Gr. 2283.....	7·16 K 0	15 1 7·156	−1886·58	+323·21	− 1·38	+87 31 18·08	−1410·4	−97·4	+ 1·8	175 174	29·59 29· 2
992	BD − 21°, 4030...	6·11 K 0	15 2 7·231	+345·31	+ 0·93	+ 0·45	−21 44 28·15	−1404·2	+18·3	− 6·6	6 6	32·56 32·22
993	BD − 12°, 4198...	7·32 A 0	15 2 27·148	+328·66	+ 0·68	+ 0·09	−12 37 1·64	−1402·1	+17·4	− 2·8	4 5	30·92 30·81
994	Br. 1925.....	5·59 A 0	15 2 56·655	+199·34	+ 0·09	− 0·65	+48 26 24·88	−1399·0	+10·7	+ 2·2	4 4	29·94 30·44
995	BD + 19°, 2924...	6·00 A 0	15 3 53·921	+274·70	+ 0·15	+ 0·29	+18 43 50·68	−1393·1	+14·7	− 6·3	5 7	27·33 27·34
996	BD + 6°, 3001....	6·22 G 5	15 3 56·838	+297·54	+ 0·32	− 0·06	+ 5 47 9·92	−1392·7	+15·9	− 2·5	4 6	28·60 27·88
997	Br. 1926.....	5·73 K 0	15 5 9·423	+258·94	+ 0·07	+ 0·02	+26 35 16·76	−1385·1	+13·9	− 2·1	5 8	28·62 28·55
998	BD + 34°, 2604...	6·89 K 0	15 5 16·891	+242·11	+ 0·03	− 0·25	+33 59 33·58	−1384·3	+13·1	+ 0·0	5	27·62
999	BD − 4°, 3818....	7·15 K 0	15 5 38·127	+315·93	+ 0·51	− 1·13	− 5 6 30·06	−1382·1	+17·0	− 6·6	6 7	30·39 30·38
1000	CD − 25°, 10758..	5·94 K 0	15 5 52·092	+354·63	+ 1·06	− 0·24	−26 2 51·14	−1380·6	+19·0	− 1·9	6 5	28·22 28·80
1001	Gr. 2194.....	6·27 K 0	15 5 56·625	+190·38	+ 0·15	− 0·06	+50 20 28·58	−1380·1	+10·4	− 2·8	4 4	28·36 28·41
1002	Gr. 2197.....	6·75 F 2	15 6 24·467	+113·36	+ 1·00	+ 0·02	+63 24 10·92	−1377·2	+ 6·3	− 0·2	18	32·54 32·07
1003	Gr. 2205.....	6·55 A 5	15 11 19·181	+213·86	+ 0·07	− 0·66	+43 19 32·46	−1345·7	+11·8	+ 4·6	14	25·65 25·51
1004	β Libr.....	2·74 B 8	15 12 58·016	+323·26	+ 0·59	− 0·66	− 9 6 25·30	−1335·0	+17·[illegible]	− 2·6	31 83	27·99 29·57
1005	BD + 37°, 2625...	7·08 F 8	15 13 29·577	+231·06	+ 0·05	− 2·26	+37 20 40·30	−1331·5	+12·9	+ 0·4	6 9	26·37 26·61
1006	BD + 69°, 789....	6·50 A 0	15 14 17·723	+ 43·21	+ 2·34	+ 0·41	+69 13 17·39	−1326·3	+ 2·6	− 1·3	8	29·12 29·57
1007	Pi 15h, 36.....	5·66 G 5	15 15 2·655	+269·02	+ 0·14	− 0·10	+20 50 46·03	−1321·4	+15·0	− 2·7	7 9	27·20 27·26
1008	BD + 10°, 2823...	6·71 F 8	15 15 5·892	+288·29	+ 0·26	− 0·64	+10 42 1·79	−1321·0	+16·1	− 0·4	4 7	28·18 28·00
1009	Br. 1939.....	6·11 F 5	15 16 49·501	+334·92	+ 0·72	+ 0·16	−15 16 43·50	−1309·6	+18·8	+ 1·8	3 5	25·68 25·99
1010	BD − 6°, 4181....	7·43 K 2	15 17 9·982	+318·54	+ 0·53	+ 0·09	− 6 20 36·15	−1307·3	+17·9	+ 0·9	4 6	25·16 25·27
1011	Br. 1940.....	5·48 K 0	15 17 12·787	+305·53	+ 0·40	− 0·31	+ 0 59 14·03	−1307·0	+17·2	−11·2	6 9	24·70 25·18
1012	CD − 26°, 10842..	6·78 K 0	15 18 27·831	+357·86	+ 1·04	+ 0·14	−26 25 16·79	−1298·7	+20·1	− 0·8	5	28·16
1013	Pi 15h, 54.....	5·78 K 0	15 19 45·040	+329·21	+ 0·64	− 0·28	−12 6 10·44	−1290·1	+18·6	− 4·6	4 7	27·88 27·65
1014	Br. 1945.....	6·10 F 0	15 19 51·534	+308·63	+ 0·43	+ 0·48	− 0 45 20·73	−1289·4	+17·5	− 3·6	7 11	24·52 25·03
1015	γ U. Min.....	3·14 A 2	15 20 49·859	− 10·63	+ 3·64	− 0·43	+72 6 3·25	−1282·9	− 0·3	+ 1·6	13 17	27·08 26·98
1016	Pi 15h, 83.....	6·26 K 5	15 24 25·171	+257·98	+ 0·12	− 0·04	+25 21 42·26	−1258·6	+14·9	− 2·9	5 10	25·44 25·65
1017	BD − 20°, 4246...	6·10 A 2	15 26 15·891	+346·36	+ 0·84	+ 0·10	−20 28 16·52	−1246·0	+20·0	− 2·7	8 10	25·38 25·57
1018	Gr. 2240.....	6·30 A 2	15 27 0·428	+154·86	+ 0·43	− 0·13	+55 27 5·16	−1240·9	+ 9·1	+ 2·5	5	26·86
1019	BD + 9°, 3055....	6·46 F 2	15 27 16·812	+290·95	+ 0·28	+ 0·25	+ 8 50 5·14	−1239·0	+16·9	− 1·1	7 9	26·56 26·51
1020	BD + 31°, 2742...	6·35 A 2	15 27 20·604	+242·79	+ 0·09	− 0·22	+31 32 31·88	−1238·6	+14·2	− 1·9	3 5	25·10 25·63
1021	γ Libr.....	4·02 K 0	15 31 18·599	+334·90	+ 0·68	+ 0·44	−14 32 24·99	−1211·0	+19·7	− 0·2	35 103	28·06 29·62
1022	α Cor. B.....	2·31 A 0	15 31 30·645	+253·07	+ 0·12	+ 0·89	+26 57 58·07	−1209·7	+15·0	− 9·8	6 10	28 59 28·30
1023	BD + 11°, 2826...	6·11 G 5	15 32 19·159	+285·52	+ 0·25	− 0·29	+11 30 50·77	−1204·1	+16·9	− 1·9	7 9	25·50 25·70
1024	θ U. Min.....	5·33 K 5	15 33 36·123	−180·65	+ 9·32	− 1·50	+77 35 58·85	−1195·1	−10·3	+ 0·8	10 13	30·91 30·07
1025	BD + 81°, 517....	6·97 K 0	15 34 22·512	−373·45	+19·79	+ 0·23	+81 1 19·30	−1189·7	−21·7	+ 1·6	5 7	29·27 29·31
1026	Br. 1975.....	5·53 G 5	15 34 35·192	+344·46	+ 0·77	+ 0·59	−19 3 20·65	−1188·2	+20·5	− 8·4	7 8	25·82 25·79
1027	BD + 23°, 2838...	7·62 K 0	15 35 8·518	+261·70	+ 0·15	− 0·47	+22 55 8·94	−1184·3	+15·6	+ 0·3	6 8	26·94 26·57
1028	Pi 15h, 153.....	5·78 F 0	15 35 51·948	+191·22	+ 0·20	+ 0·83	+47 2 39·09	−1179·1	+11·5	−13·3	7 8	26·54 26·66
1029	BD + 35°, 2711...	6·19 K 0	15 35 54·865	+231·83	+ 0·11	+ 0·00	+34 55 7·93	−1178·8	+13·9	− 2·4	7 12	28·40 27·72
1030	BD − 5°, 4143....	7·42 K 0	15 37 45·725	+319·10	+ 0·50	− 0·10	− 6 12 15·43	−1165·7	+19·2	− 0·2	7 9	25·18 25·36
1031	Br. 1987.....	6·44 K 0	15 39 12·319	+336·14	+ 0·66	− 0·05	−14 48 13·17	−1155·4	+20·3	−10·3	5 6	29·00 29·08
1032	ψ Serp.....	5·80 G 5	15 40 15·278	+302·01	+ 0·36	− 0·56	+ 2 45 15·97	−1147·9	+18·3	−15·7	4	29·67
1033	α Serp.....	2·75 K 0	15 40 34·343	+294·48	+ 0·31	+ 0·90	+ 6 39 38·34	−1145·6	+17·9	+ 3·9	4 14	28·89 30·61
1034	Gr. 2270.....	5·48 A 0	15 40 48·128	+163·77	+ 0·35	− 0·70	+52 35 49·76	−1144·0	+10·0	+ 2·5	7	32·39
1035	Br. 1993.....	5·89 A 0	15 41 17·602	+272·63	+ 0·20	− 0·20	+17 29 57·16	−1140·4	+16·6	− 0·8	4 5	28·90 28·19

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1036	CD − 27°, 10550..	6·45 A 5	15 41 38·509	+365·35	+ 1·00	− 0·52	−27 49 38·27	−1137·9	+22·2	− 3·4	5	32·48 32·27
1037	β Serp.....	3·74 A 2	15 42 43·449	+276·35	+ 0·21	+ 0·46	+15 39 20·20	−1130·1	+16·9	− 5·5	4 5	27·13 27·25
1038	λ Serp.....	4·42 G 0	15 42 47·986	+292·58	+ 0·30	− 1·52	+ 7 35 12·81	−1129·6	+17·9	− 7·2	5	29·40 29·79
1039	CD − 23°, 12525..	6·66 A 0	15 43 59·542	+355·69	+ 0·86	− 0·40	−23 36 11·92	−1120·9	+21·7	− 3·2	4	30·88
1040	Br. 1999.....	5·61 A 3	15 45 0·910	+314·25	+ 0·45	− 0·24	− 3 35 22·60	−1113·5	+19·3	+ 0·3	4 5	27·40 26·99
1041	R Cor. B.....	* G 0	15 45 28·887	+247·15	+ 0·13	− 0·04	+28 23 8·67	−1110·1	+15·2	− 2·2	5	27·80
1042	μ Serp.....	3·63 A 0	15 45 42·175	+313·51	+ 0·44	− 0·59	− 3 12 6·00	−1108·5	+19·3	− 2·9	5 7	26·56 26·15
1043	ζ U. Min.....	4·34 A 2	15 46 41·966	−219·18	+ 9·89	+ 0·61	+78 1 33·28	−1101·2	−13·1	− 0·4	7 9	29·96 30·01
1044	ε Serp.....	3·75 A 2	15 47 4·499	+298·09	+ 0·33	+ 0·83	+ 4 42 9·34	−1098·5	+18·4	+ 5·7	15 21	26·75 28·14
1045	Gr. 2315.....	7·32 A 2	15 51 5·370	−637·34	+34·84	+ 0·39	+83 10 33·56	−1069·0	−39·1	− 0·1	7 8	29·62 29·46
1046	Pi 15h, 212.....	5·76 K 5	15 51 16·133	+264·93	+ 0·18	− 0·58	+20 31 47·53	−1067·6	+16·6	+ 3·9	5 7	25·77 25·66
1047	γ Serp.....	3·86 F 5	15 52 59·232	+274·90	+ 0·21	+ 2·11	+15 54 14·74	−1054·9	+17·3	−129·3	35 101	27·86 28·81
1048	φ Serp.....	5·66 K 0	15 53 46·788	+277·56	+ 0·22	− 0·85	+14 37 42·70	−1049·0	+17·5	+ 8·0	4 6	27·90 27·09
1049	π Scor.....	3·00 B 2	15 54 18·593	+362·65	+ 0·88	− 0·09	−25 53 57·07	−1045·0	+22·8	− 3·2	4	29·99
1050	BD − 5°, 4210....	7·42 K 0	15 55 47·121	+319·14	+ 0·46	− 0·08	− 5 54 53·20	−1034·0	+20·1	− 1·7	8 10	26·15 26·40
1051	δ Scor.....	2·54 B 0	15 55 53·592	+354·50	+ 0·78	− 0·08	−22 24 33·70	−1033·2	+22·4	− 3·0	4	26·39
1052	BD + 31°, 2805...	6·68 K 0	15 57 44·943	+235·99	+ 0·14	+ 0·48	+31 46 45·49	−1019·2	+15·0	− 5·6	13 19	24·82 24·86
1053	CD − 28°, 11817..	6·16 K 0	15 58 0·360	+370·91	+ 0·96	+ 0·26	−28 55 38·38	−1017·3	+23·5	− 2·1	4 6	27·95 27·62
1054	Pi 15h, 237.....	5·10 K 0	15 58 48·325	+362·70	+ 0·86	− 0·53	−25 39 26·17	−1011·3	+23·0	− 4·6	5	27·45
1055	Pi 15h, 266.....	5·85 *	16 0 33·778	+220·46	+ 0·15	+ 0·06	+36 50 16·38	− 998·0	+14·1	− 2·5	11 12	24·68 24·85
1056	β Scor.....	2·90 B 1	16 1 4·282	+348·60	+ 0·70	− 0·05	−19 36 3·79	− 994·1	+22·3	− 2·6	5	25·19
1057	BD + 59°, 1697...	6·20 M 0	16 1 47·198	+109·02	+ 0·78	− 0·30	+59 36 57·93	− 988·7	+ 7·1	− 2·7	7 10	24·92 25·07
1058	Br. 2042.....	5·64 A 0	16 3 26·275	+333·25	+ 0·55	− 0·34	−12 32 41·03	− 976·1	+21·4	− 3·6	7 8	25·72 25·69
1059	CD − 23°, 12731..	5·79 B 9	16 4 14·651	+358·10	+ 0·77	− 0·11	−23 29 10·61	− 969·9	+23·0	− 3·1	13	26·04 25·89
1060	κ Herc.....	5·34 G 5	16 4 41·287	+270·94	+ 0·20	− 0·26	+17 14 44·81	− 966·5	+17·5	− 1·8	8 14	25·78 26·01
1061	BD + 6°, 3169....	6·02 G 5	16 5 29·474	+293·73	+ 0·29	+ 1·57	+ 6 35 28·46	− 960·4	+19·0	−74·4	7 11	25·28 25·24
1062	BD + 45°, 2374...	7·35 K 0	16 5 38·528	+187·55	+ 0·23	− 0·06	+45 34 40·60	− 959·2	+12·2	+ 0·2	6 9	26·08 26·55
1063	BD + 41°, 2673...	6·85 F 5	16 6 45·692	+203·96	+ 0·18	− 1·89	+41 17 24·05	− 950·6	+13·3	+ 6·6	5	25·44
1064	BD + 27°, 2595...	6·68 K 0	16 6 58·221	+247·47	+ 0·16	− 0·18	+26 56 13·38	− 949·0	+16·1	+ 4·0	7 8	26·02 25·95
1065	BD − 1°, 3149....	6·58 K 0	16 9 46·093	+309·94	+ 0·37	− 0·37	− 1 17 6·55	− 927·4	+20·2	− 1·6	6 8	27·60 27·02
1066	δ Ophi.....	3·03 M 0	16 10 24·741	+314·54	+ 0·40	− 0·31	− 3 30 8·71	− 922·4	+20·5	−14·9	8 37	28·54 30·00
1067	13 Herc.....	7·43 F 0	16 11 28·996	+282·70	+ 0·24	+ 0·01	+11 40 45·01	− 914·0	+18·5	− 8·3	3 4	28·44 29·20
1068	Br. 2067.....	5·56 G 0	16 11 32·622	+324·36	+ 0·46	+ 1·52	− 8 10 22·38	− 913·6	+21·2	−50·8	2 1	30·40 30·42
1069	Br. 2075.....	6·59 K 0	16 13 4·699	+255·86	+ 0·17	− 0·12	+23 18 29·66	− 901·6	+16·8	− 1·9	3 5	27·76 26·99
1070	Pi 16h, 31.....	4·87 A 0	16 13 38·500	+371·97	+ 0·85	− 0·24	−28 25 43·91	− 897·2	+24·4	−11·1	4 3	29·40 29·75
1071	Gr. 2325.....	7·04 F 0	16 13 57·228	+146·13	+ 0·43	+ 0·10	+53 25 22·29	− 894·7	+ 9·7	− 6·8	2	29·49 27·96
1072	ε Ophi.....	3·34 K 0	16 14 21·013	+316·72	+ 0·41	+ 0·55	− 4 30 38·71	− 891·6	+20·9	+ 3·5	8 20	27·02 27·11
1073	Br. 2099.....	6·51 K 2	16 14 23·758	−152·13	+ 5·52	− 1·11	+75 23 50·07	− 891·3	− 9·7	+ 3·0	8 9	32·05 31·98
1074	BD + 32°, 2702...	6·93 G 0	16 14 50·482	+232·47	+ 0·16	+ 1·21	+31 58 49·81	− 887·8	+15·4	+28·8	3 5	27·42 27·82
1075	BD − 18°, 4260...	6·89 A 0	16 15 13·930	+347·74	+ 0·62	− 0·07	−18 38 49·29	− 884·7	+22·9	+ 0·4	4	32·00
1076	σ Scor.....	3·10 B 1	16 16 37·521	+364·42	+ 0·76	− 0·08	−25 24 49·67	− 873·8	+24·1	− 2·8	7 5	29·29 29·84
1077	τ Herc.....	3·91 B 5	16 17 29·047	+180·36	+ 0·26	− 0·13	+46 29 28·84	− 867·0	+12·0	+ 3·2	7	28·45
1078	σ Serp.....	4·80 F 0	16 18 16·255	+304·74	+ 0·33	− 1·08	+ 1 12 15·87	− 860·8	+20·2	+ 4·8	5 7	30·11 30·19
1079	γ Herc.....	3·79 F 0	16 18 36·565	+264·92	+ 0·19	− 0·34	+19 19 42·03	− 858·1	+17·6	+ 3·9	31 82	27·51 27·68
1080	BD − 2°, 4179....	7·00 F 2	16 20 45·191	+312·19	+ 0·37	− 0·27	− 2 18 57·13	− 841·1	+20·8	− 1·0	7 10	27·25 26·61

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1041. $5^m.8$ to $13^m.8$.

* 1055. F5 + A2.

No	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1081	η Drac.....	2·89 G 5	16 22 58·191	+ 81·17	+ 0·92	− 0·32	+61 41 1·06	− 823·5	+ 5·6	+ 5·8	18 20	26·69 26·61
1082	α Scor.....	1·22 *	16 24 48·221	+367·62	+ 0·73	− 0·07	−26 16 0·57	− 808·9	+24·7	− 2·8	5	25·48
1083	BD − 14°, 4433...	5·75 G 0	16 25 32·331	+338·69	+ 0·51	+ 0·18	−14 23 13·85	− 803·0	+22·8	+ 1·0	3 7	25·43 25·55
1084	BD + 29°, 2834...	7·11 A 2	16 25 32·665	+238·74	+ 0·16	− 0·12	+29 14 24·63	− 802·9	+16·1	+ 0·5	6 8	28·29 28·09
1085	CD − 27°, 10967..	6·79 B 8	16 25 36·424	+371·72	+ 0·76	− 0·09	−27 45 8·54	− 802·4	+25·0	− 1·1	4 5	31·25 31·07
1086	Br. 2092.....	4·87 B 3	16 25 38·802	+364·26	+ 0·70	− 0·06	−24 57 4·06	− 802·1	+24·5	− 2·9	4	26·70
1087	BD + 6°, 3236....	6·94 F 5	16 26 10·252	+204·11	+ 0·27	+ 0·03	+ 6 8 2·56	− 797·9	+19·8	+ 0·6	6 7	28·64 28·48
1088	β Herc.....	2·81 K 0	16 26 59·607	+258·54	+ 0·18	− 0·74	+21 39 7·41	− 791·3	+17·5	− 2·2	32 79	28·03 28·40
1089	BD + 35°, 2823...	8·0 K 0	16 27 0·008	+220·14	+ 0·16	− 0·27	+35 21 51·99	− 791·2	+14·9	− 0·9	2 1	31·98 31·44
1090	BD + 35°, 2828...	6·47 K 5	16 28 17·733	+219·86	+ 0·17	+ 0·05	+35 23 8·79	− 780·8	+14·9	− 3·2	8 12	28·95 27·86
1091	τ Scor.....	2·91 B 0	16 31 12·529	+373·24	+ 0·74	− 0·08	−28 3 41·41	− 757·3	+25·3	− 2·8	10 11	25·49 25·81
1092	Pi 16h, 140.....	5·85 A 0	16 31 21·724	+ 84·19	+ 0·83	+ 0·21	+60 58 48·88	− 756·0	+ 5·8	− 1·6	10	27·31
1093	BD + 17°, 3053...	6·27 A 0	16 32 4·459	+268·90	+ 0·20	− 0·04	+17 12 38·80	− 750·3	+18·3	− 0·7	6 9	26·76 26·19
1094	σ Ophi.....	2·70 B 0	16 33 1·567	+330·10	+ 0·43	+ 0·07	−10 24 58·39	− 742·6	+22·5	+ 2·0	28 73	27·98 28·68
1095	BD + 23°, 2965...	6·89 K 0	16 33 42·352	+254·48	+ 0·17	+ 0·73	+23 1 17·12	− 737·0	+17·4	−14·4	4 6	29·00 28·51
1096	Gr. 2362.....	5·95 G 5	16 33 59·716	+175·05	+ 0·26	− 0·15	+46 45 52·47	− 734·7	+12·0	+ 0·4	5 8	30·07 29·11
1097	BD − 6°, 4467....	6·00 A 0	16 34 0·362	+321·20	+ 0·38	− 0·04	− 6 23 17·26	− 734·6	+21·9	− 1·0	4 5	28·76 28·68
1098	BD + 13°, 3177...	6·20 F 2	16 34 20·477	+276·64	+ 0·21	− 0·26	+13 50 15·94	− 731·9	+18·9	− 6·3	6 8	28·27 27·94
1099	BD + 43°, 2624...	7·15 A 2	16 35 8·783	+188·18	+ 0·22	+ 0·16	+43 42 48·27	− 725·3	+12·9	+ 3·8	6	25·78
1100	BD + 80°, 519....	6·95 G 0	16 36 5·850	−396·41	+11·25	+ 3·19	+79 56 42·13	− 717·6	−26·8	− 8·4	11 9	28·25 27·06
1101	Gr. 2369.....	5·44 G 5	16 36 29·272	+121·04	+ 0·52	0·00	+56 9 42·29	− 714·3	+ 8·4	+ 6·5	13 12	26·72 26·34
1102	Pi 16h, 159.....	5·96 A 2	16 40 18·500	+375·13	+ 0·68	− 0·22	−28 22 15·67	− 683·0	+25·8	− 0·6	6 8	26·46 26·36
1103	η Herc.....	3·61 K 0	16 40 19·340	+205·31	+ 0·18	+ 0·30	+39 3 50·89	− 682·9	+14·2	− 9·0	7 10	25·62 25·66
1104	Pi 16h, 177.....	5·90 F 2	16 41 5·523	+221·87	+ 0·17	− 0·59	+34 10 34·27	− 676·6	+15·4	+ 4·8	9 12	25·13
1105	Br. 2131.....	5·38 K 2	16 42 13·725	+287·96	+ 0·23	− 0·02	+ 8 43 5·69	− 667·2	+19·9	+ 1·0	8 12	25·36 25·74
1106	Br. 2135.....	6·04 A 2	16 43 22·727	+302·43	+ 0·28	− 0·13	+ 2 11 55·08	− 657·7	+21·0	− 1·5	7 8	25·15 25·04
1107	BD − 4°, 4165....	7·26 G 5	16 44 53·395	+316·98	+ 0·33	− 0·01	− 4 22 58·25	− 645·2	+22·0	−10·0	6 8	25·13 25·33
1108	BD − 21°, 4422...	7·60 M 0	16 45 6·382	+357·70	+ 0·53	− 0·10	−21 43 18·22	− 643·4	+24·8	− 2·3	6 9	26·00 26·61
1109	BD + 53°, 1897...	7·13 K 0	16 47 39·397	+138·43	+ 0·38	− 0·28	+53 2 42·14	− 622·3	+ 9·7	− 0·3	12 13	25·48 25·65
1110	Br. 2145.....	5·86 K 5	16 47 43·195	+234·13	+ 0·16	− 0·06	+29 56 0·57	− 621·7	+16·4	− 0·6	10 13	25·39 25·40
1111	BD + 18°, 3261...	6·87 F 5	16 49 21·705	+265·45	+ 0·18	+ 0·08	+18 11 10·68	− 608·1	+18·6	− 4·0	4 8	26·26 26·51
1112	BD + 35°, 2878...	7·7 K 5	16 49 29·105	+216·06	+ 0·17	+ 0·35	+35 36 48·77	− 607·0	+15·1	+ 0·0	3 4	27·53
1113	Br. 2146.....	5·35 K 0	16 50 34·973	+320·76	+ 0·33	− 0·26	− 6 1 56·85	− 597·9	+22·4	− 2·3	4 5	30·01 30·33
1114	ε U. Min.....	4·40 G 5	16 53 35·557	−623·14	+16·14	+ 0·69	+82 9 47·41	− 572·7	−43·4	− 0·1	229 230	29·06 28·48
1115	BD + 14°, 3155...	6·51 G 5	16 54 5·724	+275·33	+ 0·19	− 0·61	+13 59 53·60	− 568·5	+19·4	+ 6·5	3 6	30·82 30·16
1116	κ Ophi.....	3·42 K 0	16 54 6·922	+285·86	+ 0·21	− 1·98	+ 9 29 26·33	− 568·3	+20·1	− 1·3	1 4	28·44 28·76
1117	BD + 24°, 3095...	6·36 K 0	16 54 35·429	+248·85	+ 0·16	+ 0·03	+24 29 47·76	− 564·3	+17·5	− 3·1	5	30·56
1118	Gr. 2406.....	6·84 F 0	16 55 14·150	−189·34	+ 3·97	+ 0·84	+75 30 40·98	− 558·9	−13·1	− 2·0	2 3	32·81 32·40
1119	Br. 2169.....	4·82 F 5	16 55 36·738	+ 28·79	+ 1·06	+ 3·78	+65 14 57·04	− 555·8	+ 2·1	+ 4·3	5 9	31·49 31·32
1120	ε Herc.....	3·92 A 0	16 57 25·058	+229·85	+ 0·16	− 0·39	+31 2 9·23	− 540·6	+16·2	+ 2·2	10 12	25·10 25·25
1121	Br. 2158.....	6·37 K 0	16 57 27·785	+351·03	+ 0·43	− 0·28	−18 46 35·05	− 540·2	+24·8	− 2·4	7 9	26·36 26·63
1122	BD + 19°, 3218...	6·57 K 5	17 0 37·033	+260·79	+ 0·17	− 0·15	+19 47 41·72	− 513·6	+18·5	+ 1·0	1	24·51
1123	Pi 16h, 292.....	6·13 A 0	17 1 25·338	+260·98	+ 0·17	+ 0·05	+19 42 6·40	− 506·8	+18·5	− 0·5	10 15	24·70 24·88
1124	Br. 2162.....	6·29 A 0	17 1 42·898	+358·13	+ 0·44	− 0·14	−21 27 42·36	− 504·3	+25·4	− 8·2	7	26·49
1125	Pi 16h, 284.....	6·20 A 0	17 2 14·145	+371·56	+ 0·50	+ 0·00	−26 24 45·12	− 499·9	+26·3	− 2·6	5 4	26·52 26·28

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1082. M 0 + A 3.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1126	Pi 16h, 307.....	6·36 A 0	17 2 47·730	+182·61	+ 0·21	+ 0·02	+43 54 48·44	− 495·1	+13·0	− 0·3	6 11	24·84 24·96
1127	Pi 16h, 310.....	6·32 K 0	17 2 50·200	+158·80	+ 0·27	+ 0·30	+48 54 24·38	− 494·8	+11·3	− 7·7	13 15	26·35 26·51
1128	Pi 16h, 303.....	6·02 A 0	17 4 21·374	+309·50	+ 0·25	− 0·15	− 0 58 54·08	− 481·9	+22·0	− 3·8	5 7	27·92 27·34
1129	BD + 31°, 2967...	6·61 K 2	17 5 9·241	+228·34	+ 0·15	− 0·02	+31 18 10·57	− 475·1	+16·3	− 1·6	5 6	28·11 28·01
1130	BD + 28°, 2677...	6·99 F 2	17 5 23·192	+237·27	+ 0·15	− 0·16	+28 19 56·52	− 473·1	+16·9	−13·1	4 6	27·77 28·02
1131	η Ophi.....	2·63 A 2	17 6 4·461	+343·64	+ 0·35	+ 0·24	−15 37 58·96	− 467·3	+24·5	+ 9·0	37 103	27·49 29·16
1132	BD − 14°, 4565...	7·26 G 0	17 7 42·683	+341·01	+ 0·34	− 0·11	−14 31 43·77	− 453·4	+24·3	− 5·9	5 6	27·50 27·33
1133	BD + 8°, 3367....	6·39 K 0	17 8 8·106	+289·01	+ 0·20	+ 0·18	+ 7 59 6·37	− 449·8	+20·6	+ 0·4	6 7	25·51 25·63
1134	BD + 21°, 3070...	6·93 K 0	17 10 27·173	+255·82	+ 0·16	+ 0·07	+21 31 4·69	− 430·0	+18·3	− 0·9	9 13	26·04 25·77
1135	α^1 Herc.....	3·48 M 3	17 11 13·548	+273·56	+ 0·17	− 0·07	+14 28 29·28	− 423·4	+19·6	+ 3·0	11 12	25·73 26·00
1136	BD − 9°, 4525....	7·06 F 5	17 11 33·525	+329·67	+ 0·28	+ 0·07	− 9 43 28·32	− 420·5	+23·6	− 2·2	4 5	25·74 25·88
1137	Pi 17h, 61.....	5·47 A 3	17 11 53·481	+ 51·22	+ 0·69	+ 0·20	+62 57 35·59	− 417·7	+ 3·7	+ 4·8	12 15	27·96 27·88
1138	BD + 1°, 3408....	* B 8	17 12 43·271	+304·33	+ 0·22	− 0·01	+ 1 17 34·67	− 410·6	+21·8	− 2·0	14 15	25·46 25·43
1139	BD + 39°, 3098...	7·37 F 5	17 14 24·703	+199·12	+ 0·17	− 0·36	+39 32 44·62	− 396·1	+14·3	+13·9	11 12	26·20 26·08
1140	Br. 2191.....	5·28 K 5	17 15 5·306	+281·93	+ 0·18	+ 0·01	+10 56 40·64	− 390·3	+20·2	− 9·6	11 17	26·05 25·72
1141	Pi 17h, 43.....	6·04 A 0	17 15 31·244	+349·07	+ 0·32	− 0·08	−17 40 45·53	− 386·6	+25·0	− 2·6	8	26·40 26·25
1142	Gr. 2437.....	6·81 K 2	17 17 22·536	− 93·81	+ 1·65	− 0·07	+71 52 14·34	− 370·7	− 6·6	− 0·6	13 14	27·18 27·46
1143	θ Ophi.....	3·37 B 3	17 17 24·044	+368·31	+ 0·38	− 0·02	−24 55 33·03	− 370·4	+26·5	− 2·5	7 6	25·88 25·74
1144	Pi 17h, 76.....	5·96 K 0	17 20 12·727	+358·79	+ 0·33	− 0·15	−21 22 21·67	− 346·2	+25·8	− 3·4	7 8	25·58 25·55
1145	BD − 1°, 3329....	6·31 F 5	17 22 4·180	+310·93	+ 0·21	+ 0·41	− 1 35 13·95	− 330·2	+22·4	+ 4·7	4	28·78
1146	BD + 16°, 3183...	6·69 F 2	17 22 19·460	+268·36	+ 0·15	− 0·13	+16 26 55·14	− 328·0	+19·4	+ 2·9	8	30·03
1147	BD + 50°, 2400...	7·87 F 2	17 22 35·402	+147·37	+ 0·24	− 0·20	+50 29 33·34	− 325·7	+10·7	− 6·6	7	30·58
1148	BD + 7°, 3368....	5·98 *	17 22 41·665	+289·54	+ 0·17	− 0·01	+ 7 39 37·37	− 324·8	+20·9	− 0·9	4 5	28·51
1149	σ Ophi.....	4·44 K 0	17 22 47·491	+297·59	+ 0·18	− 0·01	+ 4 12 15·87	− 324·0	+21·5	+ 0·4	51 120	26·66 27·80
1150	Pi 17h, 90.....	5·92 B 9	17 22 50·411	+382·38	+ 0·38	− 0·07	−29 39 38·59	− 323·6	+27·6	− 3·2	4 5	32·30 32·53
1151	BD + 27°, 2809...	6·36 A 5	17 23 0·465	+240·24	+ 0·14	+ 0·02	+26 56 33·65	− 322·1	+17·3	+ 1·6	5 7	29·92 29·97
1152	BD + 58°, 1731...	6·52 A 2	17 24 57·138	+ 89·94	+ 0·39	− 0·11	+58 42 51·09	− 305·3	+ 6·5	+ 1·2	5 4	27·33 27·01
1153	Gr. 2456.....	5·91 K 2	17 25 16·581	−457·86	+ 5·55	+ 0·64	+80 12 15·67	− 302·5	−32·9	+ 0·0	6 7	29·54 28·95
1154	β Drac.....	2·99 G 0	17 28 44·104	+135·64	+ 0·25	− 0·19	+52 21 22·62	− 272·6	+ 9·9	+ 0·8	16 20	26·59 26·54
1155	BD − 5°, 4461....	5·69 A 2	17 29 29·479	+320·48	+ 0·20	− 0·32	− 5 41 27·56	− 266·0	+23·2	−10·2	8 7	26·01 26·22
1156	BD − 11°, 4411...	5·56 B 8	17 30 35·973	+333·50	+ 0·21	− 0·10	−11 11 32·76	− 256·4	+24·2	+ 0·2	6 7	28·47 28·50
1157	α Ophi.....	2·14 A 5	17 31 27·100	+277·61	+ 0·15	+ 0·80	+12 36 47·87	− 249·0	+20·1	−23·2	52 138	27·29 28·52
1158	BD + 41°, 2856...	7·16 A 0	17 32 17·032	+192·14	+ 0·16	− 0·02	+40 57 25·51	− 241·8	+14·0	+ 1·4	5 7	29·72 29·53
1159	BD + 12°, 3256...	7·04 K 5	17 32 21·512	+278·86	+ 0·15	+ 0·00	+12 5 38·16	− 241·2	+20·2	+ 0·5	5	27·53
1160	Pi 17h, 156.....	5·92 A 5	17 33 17·853	+344·15	+ 0·22	− 0·08	−15 31 34·46	− 233·0	+25·0	− 0·5	4 5	29·56 29·17
1161	BD + 30°, 3033...	5·76 A 2	17 33 45·378	+228·05	+ 0·13	+ 0·21	+30 49 49·85	− 229·0	+16·6	− 1·1	6	30·56
1162	Br. 2223.....	5·67 A 0	17 34 25·570	+247·17	+ 0·13	− 0·11	+24 21 12·79	− 223·2	+17·9	− 0·1	4 6	29·84 29·40
1163	Br. 2227.....	5·54 K 0	17 34 39·860	+156·48	+ 0·19	+ 0·29	+48 37 43·86	− 221·1	+11·4	+ 5·8	4	29·99
1164	BD + 3°, 3465....	6·56 K 0	17 35 33·385	+298·92	+ 0·15	− 1·21	+ 3 35 53·54	− 213·4	+21·7	−10·2	4 5	27·77 28·33
1165	BD + 36°, 2912...	6·85 K 0	17 35 42·622	+207·91	+ 0·14	+ 0·40	+36 47 20·73	− 212·0	+15·1	+ 0·3	4	28·80
1166	ι Herc.....	3·79 B 3	17 37 20·694	+169·36	+ 0·17	− 0·07	+46 2 43·96	− 197·8	+12·3	+ 0·0	4	26·99
1167	β Ophi.....	2·94 K 0	17 39 45·944	+296·58	+ 0·14	− 0·29	+ 4 35 51·33	− 176·7	+21·6	+15·4	13 20	27·53 28·47
1168	BD − 22°, 4423...	6·24 K 0	17 43 13·612	+362·35	+ 0·19	+ 0·01	−22 27 3·04	− 146·6	+26·4	− 1·6	4 6	27·51 27·70
1169	BD − 14°, 4770...	6·07 B 9	17 43 19·988	+342·24	+ 0·17	− 0·10	−14 41 55·33	− 145·6	+24·9	− 2·6	4	28·26
1170	μ Herc.....	3·48 G 5	17 43 31·123	+237·11	+ 0·12	− 2·38	+27 45 45·39	− 144·0	+17·3	−74·7	4 6	30·58

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1138. $5^m.7$ to $6^m.4$.
* 1148. A 0 + G.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1171	Pi 17h, 223.....	6·16 B 3	17 43 46·325	+375·05	+ 0·20	− 0·01	−26 56 56·81	− 141·8	+27·3	− 1·8	4	30·87
1172	BD + 17°, 3334...	5·58 A 0	17 43 49·262	+264·68	+ 0·12	+ 0·05	+17 43 25·56	− 141·4	+19·3	− 1·2	4 6	29·31 28·71
1173	γ Ophi.....	3·74 A 0	17 44 7·819	+300·91	+ 0·13	− 0·16	+ 2 44 3·57	− 138·7	+21·9	− 7·6	52 132	27·70 28·25
1174	Br. 2239.....	5·34 K 0	17 45 46·548	+243·24	+ 0·12	− 0·06	+25 38 48·32	− 124·3	+17·7	− 4·3	4 5	27·22 27·28
1175	BD + 9°, 3485....	6·79 K 5	17 46 36·153	+284·07	+ 0·12	− 0·18	+ 9 52 12·99	− 117·1	+20·7	− 5·7	7	26·96
1176	BD + 80°, 555....	7·10 M 0	17 48 6·308	−474·21	+ 2·15	− 0·70	+80 18 33·62	− 104·0	−34·5	+ 0·4	14 19	29·84 28·69
1177	BD − 1°, 3412....	6·45 K 0	17 48 6·738	+310·12	+ 0·13	− 0·12	− 1 13 7·04	− 103·9	+22·6	− 0·4	10 12	25·04 25·05
1178	BD − 7°, 4523....	6·87 G 5	17 50 53·744	+325·38	+ 0·12	− 0·38	− 7 43 11·17	− 79·6	+23·7	− 6·0	11 13	27·07 26·92
1179	BD + 22°, 3237...	5·69 K 2	17 52 41·627	+252·03	+ 0·11	− 0·04	+22 28 28·56	− 63·9	+18·4	− 0·3	7	25·07
1180	BD + 55°, 1995...	6·10 F 0	17 54 1·118	+109·39	+ 0·17	+ 0·37	+55 58 43·00	− 52·3	+ 8·0	+11·6	6 7	27·37 27·25
1181	BD + 33°, 2995...	6·78 K 0	17 54 39·655	+219·16	+ 0·12	+ 0·14	+33 24 29·90	− 46·7	+16·0	− 1·4	4 6	27·80 27·71
1182	γ Drac.....	2·42 K 5	17 54 51·716	+139·34	+ 0·15	− 0·12	+51 29 49·61	− 44·9	+10·2	− 2·4	4 5	28·08 27·99
1183	ν Ophi.....	3·50 K 0	17 54 53·762	+330·27	+ 0·11	− 0·06	− 9 45 56·41	− 44·6	+24·1	−11·8	5 18	28·69 29·30
1184	BD + 14°, 3374...	7·29 A 0	17 54 55·762	+272·69	+ 0·11	+ 0·07	+14 31 1·03	− 44·3	+19·9	− 2·1	4	28·61
1185	BD + 62°, 1586...	7·22 K 0	17 55 43·437	+ 49·36	+ 0·20	− 0·71	+62 36 55·69	− 37·4	+ 3·6	+ 8·7	5	31·01
1186	BD + 62°, 1587...	7·70 A 2	17 55 49·020	+ 49·22	+ 0·20	+ 0·11	+62 37 36·74	− 36·6	+ 3·6	− 2·1	2 3	31·63 31·29
1187	BD + 52°, 2119...	7·71 A 2	17 56 23·990	+134·88	+ 0·14	+ 0·06	+52 13 25·46	− 31·5	+ 9·8	− 2·8	4	31·63
1188	δ U. Min.....	4·44 A 0	17 56 25·130	−1950·99	+ 5·98	+ 1·47	+86 36 50·37	− 31·3	−142·2	+ 5·0	163 160	28·91 28·06
1189	Br. 2257.....	4·81 B 3	17 56 32·824	+297·07	+ 0·10	− 0·01	+ 4 22 18·98	− 30·2	+21·7	− 1·6	5 6	29·59 29·75
1190	67 Ophi.....	3·95 B 5	17 56 53·237	+300·43	+ 0·10	− 0·02	+ 2 56 2·45	− 27·2	+21·9	− 1·1	5 12	28·15 29·55
1191	6 Sgtr.....	6·31 K 2	17 57 1·572	+348·53	+ 0·10	+ 0·00	−17 9 17·88	− 26·0	+25·4	− 0·9	4	30·34
1192	Gr. 2500.....	7·22 F 2	18 0 18·076	+177·18	+ 0·12	− 0·44	+44 13 57·91	+ 2·6	+12·9	− 6·0	7 8	25·09 25·27
1193	γ Sgtr.....	3·07 K 0	18 0 59·297	+385·76	+ 0·07	− 0·40	−30 25 35·02	+ 8·6	+28·1	−19·3	3 4	28·31 28·13
1194	BD + 39°, 3310...	7·46 A 0	18 1 38·748	+197·22	+ 0·11	− 0·10	+39 28 33·09	+ 14·4	+14·4	− 3·0	5 10	27·33 27·16
1195	Pi 17h, 356.....	6·22 B 1	18 2 41·355	+359·79	+ 0·07	− 0·08	−21 27 9·89	+ 23·5	+26·2	− 0·1	6 7	29·06 28·85
1196	Pi 17h, 359.....	4·66 K 0	18 3 19·918	+379·73	+ 0·05	+ 0·20	−28 27 59·69	+ 29·1	+27·7	− 3·4	4	29·02
1197	72 Ophi.....	3·73 A 3	18 3 47·538	+284·80	+ 0·09	− 0·42	+ 9 33 7·97	+ 33·2	+20·7	+ 7·8	46 134	27·60 28·47
1198	BD + 15°, 3365...	6·78 K 0	18 3 59·186	+269·20	+ 0·10	− 0·08	+15 54 32·84	+ 34·9	+19·6	−14·9	6 7	27·30 27·06
1199	BD − 2°, 4558....	6·85 G 5	18 4 43·438	+314·09	+ 0·08	+ 0·07	− 2 55 10·43	+ 41·3	+22·9	+ 0·2	4	28·06
1200	Br. 2279.....	6·00 A 3	18 4 47·985	+241·87	+ 0·10	− 0·05	+26 5 6·28	+ 42·0	+17·6	+ 3·0	5	27·78
1201	Gr. 2518.....	6·31 A 0	18 5 13·858	+149·76	+ 0·11	− 0·05	+49 41 55·74	+ 45·7	+10·9	+ 1·5	4	29·34
1202	BD − 13°, 4863...	6·50 K 0	18 5 27·825	+340·46	+ 0·06	+ 0·02	−13 56 53·11	+ 47·8	+24·8	− 0·5	5 6	31·02 30·59
1203	Br. 2321.....	5·80 F 5	18 5 45·735	−450·03	− 0·60	+ 1·72	+79 59 46·79	+ 50·4	−32·8	+11·8	8 10	31·25 31·22
1204	BD + 6°, 3639....	7·13 K 0	18 6 3·594	+292·79	+ 0·08	− 0·30	+ 6 11 30·07	+ 53·0	+21·3	+ 2·8	5 6	26·16 26·08
1205	μ Sgtr.....	4·01 B 8	18 9 16·613	+358·75	+ 0·03	+ 0·01	−21 4 47·33	+ 81·1	+26·1	− 0·3	10 12	24·87 24·96
1206	BD − 17°, 5112...	5·98 K 5	18 12 49·688	+349·10	+ 0·01	− 0·03	−17 24 3·19	+ 112·1	+25·4	− 2·2	7 8	26·26 26·05
1207	BD + 30°, 3162...	6·98 K 0	18 13 1·175	+229·09	+ 0·10	+ 0·23	+30 22 23·83	+ 113·8	+16·6	+ 1·2	12 14	24·88 24·97
1208	Br. 2292.....	6·30 A 5	18 13 16·292	+330·29	+ 0·03	+ 0·00	− 9 47 6·74	+ 116·0	+24·0	− 6·7	8 10	27·68 27·36
1209	BD + 13°, 3593...	6·18 B 5	18 14 36·806	+274·65	+ 0·08	− 0·07	+13 44 50·78	+ 127·7	+19·9	− 2·6	9 11	25·93 25·84
1210	Br. 2300.....	5·49 K 5	18 16 5·395	+246·77	+ 0·09	+ 0·06	+24 24 50·39	+ 140·6	+17·9	− 0·3	5 6	26·09 26·16
1211	δ Sgtr.....	2·84 K 0	18 16 11·530	+383·81	− 0·06	+ 0·29	−29 51 40·80	+ 141·5	+27·9	− 3·2	4 5	28·13 28·23
1212	Br. 2299.....	4·92 G 5	18 17 7·334	+299·50	+ 0·05	− 0·03	+ 3 20 32·55	+ 149·6	+21·7	+ 0·9	5 8	27·53 27·79
1213	η Serp.....	3·42 K 0	18 17 25·570	+314·08	+ 0·04	− 3·72	− 2 55 12·52	+ 152·3	+22·8	−69·9	55 146	27·85 28·73
1214	109 Herc.....	3·92 K 0	18 20 30·030	+254·22	+ 0·08	+ 1·38	+21 44 4·60	+ 179·1	+18·4	−25·0	14 15	25·01 25·03
1215	Br. 2303.....	4·96 *	18 20 52·966	+357·26	− 0·04	+ 0·04	−20 34 59·26	+ 182·4	+25·9	− 2·9	10 13	26·64 26·72

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1215. K 0 + A 0.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1216	BD + 7°, 3682....	5·69 *	18 22 2·227	+288·61	+ 0·05	+ 0·01	+ 7 59 19·78	+ 192·4	+20·9	− 0·8	8 10	26·51 26·42
1217	BD + 29°, 3259...	5·71 A 2	18 23 5·118	+231·18	+ 0·09	+ 0·10	+29 47 5·79	+ 201·6	+16·7	− 2·5	4 5	26·52 26·71
1218	λ Sgtr.....	2·94 K 0	18 23 20·511	+370·59	− 0·09	− 0·36	−25 27 51·54	+ 203·8	+26·8	−18·8	5 4	28·37 28·57
1219	CD − 26°, 13192..	6·28 A 3	18 23 25·280	+374·44	− 0·10	− 0·01	−26 48 11·38	+ 204·5	+27·1	− 4·1	6 5	28·27 28·19
1220	γ Scut.....	4·73 A 3	18 24 55·323	+341·92	− 0·04	+ 0·00	−14 36 53·23	+ 217·5	+24·7	− 0·2	51 105	27·93 28·68
1221	BD − 10°, 4713...	5·80 B 3	18 27 16·079	+332·71	− 0·03	− 0·03	−10 50 55·16	+ 237·9	+24·0	− 1·9	5 6	27·32 27·37
1222	BD + 16°, 3529...	5·67 A 0	18 27 44·188	+267·04	+ 0·06	− 0·29	+16 52 32·04	+ 242·0	+19·3	− 3·3	7 7	25·64 26·10
1223	Gr. 2589.....	7·17 F 5	18 28 33·940	+191·81	+ 0·08	− 0·26	+41 3 7·04	+ 249·2	+13·8	+ 2·3	7	25·09
1224	Gr. 2596.....	6·90 F 8	18 30 20·714	+200·86	+ 0·08	− 0·04	+38 46 39·08	+ 264·6	+14·5	− 8·8	10	26·38
1225	Gr. 2601.....	6·43 B 9	18 30 28·262	+137·39	+ 0·02	− 0·16	+52 3 31·02	+ 265·7	+ 9·9	+ 0·5	4 5	27·80 27·57
1226	BD + 20°, 3847...	6·44 A 2	18 31 5·895	+258·02	+ 0·07	− 0·01	+20 24 25·87	+ 271·2	+18·6	− 0·6	5 8	28·43 28·24
1227	α Scut.....	4·06 K 0	18 31 7·490	+326·59	− 0·03	− 0·12	− 8 17 52·71	+ 271·4	+23·5	−31·4	37 113	28·02 28·88
1228	BD + 10°, 3573...	6·38 A 0	18 31 15·862	+281·95	+ 0·04	− 0·01	+10 49 55·54	+ 272·6	+20·3	− 0·9	5	26·39
1229	Br. 2340.....	4·95 F 8	18 31 16·809	+103·52	− 0·05	− 0·11	+56 59 16·25	+ 272·7	+ 7·4	− 0·7	5	28·58
1230	Gr. 2603.....	6·66 A 0	18 31 40·409	+169·46	+ 0·06	− 0·02	+46 9 33·88	+ 276·1	+12·2	+ 1·1	6 7	28·95 28·90
1231	BD + 67°, 1079...	6·81 K 5	18 32 30·784	− 15·55	− 0·50	− 0·28	+67 43 5·62	+ 283·4	− 1·2	− 1·0	9	29·53
1232	BD + 0°, 3975....	7·02 F 8	18 33 20·347	+305·23	+ 0·00	+ 0·10	+ 0 53 12·49	+ 290·6	+21·9	+ 2·0	7 8	24·81 24·90
1233	Pi 18h, 128.....	6·80 F 2	18 33 30·186	+348·45	− 0·09	+ 0·00	−17 17 45·27	+ 292·0	+25·1	− 0·1	10	26·50
1234	Br. 2412.....	6·15 A 2	18 34 5·539	−788·46	−11·02	+ 0·66	+83 7 22·53	+ 297·1	−56·9	− 2·5	10 12	30·16 29·91
1235	α Lyra.....	0·14 A 0	18 34 23·871	+201·38	+ 0·08	+ 1·72	+38 42 47·10	+ 299·7	+14·4	+28·0	10 11	24·91 24·94
1236	Pi 18h, 174.....	5·60 A 0	18 36 52·766	+ 54·35	− 0·25	− 0·14	+62 27 28·89	+ 321·2	+ 3·8	+ 4·2	12 11	27·12 26·85
1237	δ Scut.....	4·74 F 0	18 38 9·994	+328·45	− 0·06	+ 0·07	− 9 7 31·33	+ 332·3	+23·5	− 0·2	53 124	27·72 28·60
1238	BD + 31°, 3332...	6·47 A 0	18 38 51·292	+226·42	+ 0·08	+ 0·01	+31 32 39·91	+ 338·2	+16·2	+ 0·4	7 9	25·26 25·46
1239	Pi 18h, 155.....	5·76 B 8	18 40 12·939	+368·88	− 0·20	+ 0·02	−25 5 14·51	+ 349·9	+26·4	− 2·7	5 6	27·84 27·97
1240	φ Sgtr.....	3·30 B 8	18 40 58·210	+374·48	− 0·23	+ 0·39	−27 4 8·95	+ 356·4	+26·8	− 0·2	4 3	25·67 25·68
1241	Br. 2345.....	5·80 K 2	18 41 49·189	+361·64	− 0·19	+ 0·21	−22 28 19·28	+ 363·7	+25·8	− 0·2	6	26·84
1242	β Scut.....	4·47 G 0	18 43 11·670	+318·37	− 0·05	− 0·07	− 4 49 45·56	+ 375·6	+22·7	− 2·1	54 128	27·48 28·32
1243	BD + 18°, 3817...	6·27 K 5	18 43 23·870	+263·05	+ 0·05	+ 0·16	+18 37 29·53	+ 377·3	+18·7	− 2·6	10 12	26·79 26·93
1244	BD − 13°, 5119...	6·51 K 2	18 46 16·841	+399·10	− 0·13	− 0·07	−13 39 34·65	+ 402·0	+24·1	− 0·5	8	26·33
1245	BD + 7°, 3862....	7·06 K 5	18 46 47·842	+290·35	+ 0·00	− 0·16	+ 7 22 16·06	+ 406·5	+20·6	− 3·9	10 12	25·62 25·60
1246	BD + 26°, 3368...	6·92 A 2	18 46 53·769	+242·51	+ 0·06	− 0·01	+26 20 13·48	+ 407·3	+17·2	+ 2·9	7	24·93
1247	7 Aqil.....	6·89 A 2	18 47 9·403	+314·94	− 0·06	− 0·34	− 3 20 55·82	+ 409·6	+22·2	− 5·5	3	26·94
1248	β Lyra.....	* *	18 47 18·561	+221·45	+ 0·07	+ 0·01	+33 16 28·83	+ 410·8	+15·7	− 0·7	14 17	25·15 25·04
1249	Br. 2362.....	6·04 A 3	18 47 25·791	+315·07	− 0·06	− 0·03	− 3 24 24·42	+ 411·9	+22·4	− 2·7	2 3	27·54 27·19
1250	CD − 29°, 15449..	6·29 K 0	18 47 51·255	+381·15	− 0·31	− 0·04	−29 28 9·20	+ 415·5	+27·1	− 4·4	5	28·04
1251	Br. 2371.....	5·33 B 9	18 49 4·133	+256·28	+ 0·05	− 0·08	+21 20 1·67	+ 425·9	+18·2	− 1·2	5 7	27·60 27·32
1252	σ Sgtr.....	2·14 B 3	18 50 36·912	+371·98	− 0·29	+ 0·09	−26 23 26·69	+ 439·1	+26·4	− 5·8	3 4	27·65 26·94
1253	δ^1 Lyra.....	5·51 B 3	18 51 6·269	+209·51	+ 0·06	− 0·02	+36 52 37·66	+ 443·3	+14·8	− 0·6	12 13	25·72 25·79
1254	BD − 16°, 5078...	5·58 F 5	18 51 11·777	+345·80	− 0·18	− 0·20	−16 28 8·69	+ 444·1	+24·5	−18·5	8 9	26·15 26·19
1255	θ Serp.....	4·50 A 5	18 52 29·426	+297·94	− 0·03	+ 0·29	+ 4 6 17·61	+ 455·1	+21·0	+ 3·0	27 94	27·75 28·68
1256	λ U. Min.....	6·55 M 3	18 52 55·674	−7363·47	+984·83	−10·55	+89 1 42·55	+ 459·0	−522·7	+ 0·8	60 51	29·16 28·72
1257	Br. 2375.....	5·04 K 0	18 53 2·702	+320·82	− 0·09	+ 0·41	− 5 56 41·32	+ 459·8	+22·7	− 3·7	6 7	27·40 27·57
1258	Br. 2379.....	5·65 B 8	18 53 30·196	+301·75	− 0·04	− 0·06	+ 2 26 8·34	+ 463·7	+21·3	− 1·4	6	26·54
1259	Br. 2385.....	5·94 A 3	18 55 20·293	+275·40	+ 0·02	− 0·05	+13 48 17·49	+ 479·3	+19·4	− 5·5	7 8	25·86 26·05
1260	γ Lyra.....	3·30 A 0	18 56 8·170	+224·42	+ 0·06	− 0·05	+32 35 8·94	+ 486·1	+15·8	− 0·3	8	26·90

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1216. G 0 + A 3.
* 1248. $3^m.4$ to $4^m.3$.
B 8 + B 2.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1261	ε Aqil	4·21 K 0	18 56 13·038	+272·63	+ 0·02	− 0·39	+14 57 55·04	+ 486·8	+19·2	− 7·5	45 117	28·16 28·92
1262	Gr. 2727	6·12 B 5	18 56 19·247	+196·28	+ 0·05	+ 0·02	+40 34 31·63	+ 487·6	+13·8	− 0·3	9 10	26·66 26·46
1263	ζ Sgtr	2·71 A 2	18 57 50·431	+381·95	− 0·40	− 0·15	−29 59 18·10	+ 500·5	+26·8	− 0·5	5 3	28·02 28·34
1264	BD + 19°, 3888	6·25 K 0	18 59 36·403	+261·42	+ 0·04	− 0·03	+19 33 2·83	+ 515·5	+18·3	− 0·8	15 15	24·96 25·10
1265	CD − 23°, 15008	6·9 A 0	18 59 42·685	+362·11	− 0·30	− 0·06	−23 0 28·95	+ 516·4	+25·4	+ 0·3	6 7	27·39 27·14
1266	ζ Aqil	3·02 A 0	19 1 57·741	+275·77	+ 0·01	− 0·06	+13 45 3·33	+ 535·4	+19·3	−10·1	6 7	25·88 26·14
1267	BD + 82°, 572	6·83 A 0	19 2 1·950	−640·74	−15·07	+ 0·55	+82 15 54·60	+ 535·9	−45·1	+ 2·2	10	31·93 31·70
1268	λ Aqil	3·55 B 9	19 2 16·092	+318·53	− 0·11	− 0·17	− 4 59 46·92	+ 537·9	+22·2	− 8·9	19 52	28·15 29·60
1269	Gr. 2759	6·82 B 9	19 2 21·636	+174·89	+ 0·01	+ 0·30	+45 48 25·60	+ 538·7	+12·2	+ 1·2	5	27·11
1270	BD − 1°, 3649	6·72 B 8	19 2 42·170	+310·56	− 0·09	+ 0·08	− 1 27 43·68	+ 541·6	+21·7	− 1·6	5	29·14
1271	Pi 18h, 318	5·46 A 5	19 3 39·068	+237·48	+ 0·06	+ 0·56	+28 30 35·71	+ 549·6	+16·5	+ 8·3	4	29·38
1272	π Sgtr	3·02 F 2	19 5 18·264	+356·88	− 0·31	− 0·01	−21 8 38·72	+ 563·5	+24·8	− 4·0	5	27·97
1273	Br. 2410	5·37 F 2	19 5 19·452	+293·91	− 0·04	− 0·10	+ 5 57 15·12	+ 563·6	+20·4	− 7·8	5	26·93
1274	BD − 12°, 5311	5·62 K 0	19 9 3·971	+335·36	− 0·21	+ 0·07	−12 24 34·53	+ 595·0	+23·2	− 2·6	5	26·98
1275	Br. 2433	5·24 K 0	19 10 15·423	+113·10	− 0·23	+ 0·44	+56 43 51·86	+ 604·9	+ 7·7	+ 4·4	6 6	26·88 26·21
1276	ψ Sgtr	4·93 F 5	19 10 56·507	+367·68	− 0·41	+ 0·32	−25 23 14·05	+ 610·6	+25·4	− 3·0	6 7	27·44 28·03
1277	Br. 2425	5·62 A 3	19 12 3·333	+258·24	+ 0·03	+ 0·24	+21 5 59·71	+ 619·9	+17·8	+ 0·9	8 9	25·80 25·88
1278	δ Drac	3·24 K 0	19 12 32·495	+ 0·24	− 1·16	+ 1·66	+67 31 46·82	+ 623·9	− 0·1	+ 9·0	9 8	29·19 29·30
1279	43 Sgtr	5·03 K 0	19 13 14·817	+351·18	− 0·32	− 0·09	−19 5 15·59	+ 629·8	+24·2	− 1·8	4	26·52
1280	ω Aquil	5·14 A 5	19 14 17·712	+281·60	− 0·02	− 0·01	+11 27 32·72	+ 638·5	+19·3	+ 1·2	3 11	26·83 25·71
1281	κ Cygn	3·98 K 0	19 15 22·120	+138·04	− 0·13	+ 0·64	+53 13 47·25	+ 647·4	+ 9·4	+12·2	4 5	26·57 26·98
1282	BD + 37°, 3413	6·19 A 0	19 16 22·665	+211·06	+ 0·05	+ 0·08	+37 18 22·28	+ 655·7	+14·4	+ 1·5	9	27·12
1283	Br. 2435	5·10 G 5	19 16 32·655	+319·56	− 0·16	+ 0·74	− 5 33 25·37	+ 657·1	+21·9	+ 4·7	6 7	26·70 26·68
1284	π Drac	4·63 A 2	19 20 17·128	+ 30·97	− 0·96	+ 0·21	+65 34 12·55	+ 687·9	+ 2·0	+ 4·1	8 9	27·34 27·48
1285	BD − 14°, 5428	5·81 K 0	19 21 7·360	+338·64	− 0·28	+ 0·49	−14 2 48·34	+ 694·8	+23·0	+ 5·2	7	25·98
1286	Br. 2456	4·86 B 3	19 21 10·020	+236·44	+ 0·05	+ 0·09	+29 28 25·57	+ 695·2	+16·0	+ 1·0	7 8	25·29 25·44
1287	δ Aqil	3·44 F 0	19 21 43·030	+300·80	− 0·09	+ 1·70	+ 2 57 51·36	+ 699·7	+20·4	+ 7·8	43 94	27·70 28·59
1288	Br. 2448	5·56 K 0	19 21 50·835	+357·68	− 0·41	+ 0·23	−21 55 34·75	+ 700·7	+24·3	− 0·2	5	27·61 28·61
1289	Br. 2462	6·04 K 5	19 23 11·755	+262·45	+ 0·02	− 0·05	+19 44 29·13	+ 711·8	+17·7	− 5·1	6 4	27·11
1290	Gr. 2844	6·72 G 5	19 23 39·234	+183·40	+ 0·01	− 0·40	+44 46 53·08	+ 715·5	+12·3	− 7·7	3 6	28·68 27·50
1291	BD + 76°, 734	* N 3	19 24 15·098	−208·63	− 5·25	− 0·29	+76 24 42·59	+ 720·4	−14·3	+ 0·2	11 12	28·99 28·78
1292	BD + 83°, 552	6·34 A 2	19 24 49·851	−756·39	−27·21	+ 0·45	+83 19 11·26	+ 725·1	−51·5	+ 1·0	9	30·66
1293	Pi 19h, 126	5·53 K 0	19 25 13·896	+371·10	− 0·53	+ 0·23	−27 8 25·59	+ 728·4	+25·0	− 4·5	6 7	26·08 26·60
1294	BD − 0°, 3760	6·52 K 2	19 25 27·632	+307·08	− 0·13	+ 0·02	+ 0 5 27·52	+ 730·3	+20·7	− 0·9	8 9	25·19 25·13
1295	BD + 62°, 1716	6·46 K 5	19 25 34·502	+ 69·25	− 0·65	+ 0·23	+62 24 11·87	+ 731·2	+ 4·5	+ 5·0	8	28·35
1296	BD + 33°, 3480	6·64 K 0	19 27 28·459	+224·98	+ 0·06	+ 0·02	+33 34 16·02	+ 746·6	+15·1	− 2·0	6 8	25·26 25·35
1297	β^1 Cygn	3·24 *	19 27 41·717	+241·92	+ 0·05	− 0·02	+27 48 4·48	+ 748·4	+16·2	− 0·8	7 11	24·87 24·92
1298	ι Cygn	3·94 A 2	19 27 48·850	+151·08	− 0·11	+ 0·21	+51 34 10·13	+ 749·4	+10·1	+12·7	10 11	27·71 27·43
1299	BD + 5°, 4177	7·16 F 8	19 28 1·411	+295·11	− 0·08	+ 0·68	+ 5 36 33·15	+ 751·1	+19·8	− 0·8	10	25·72 25·92
1300	BD + 70°, 1073	6·25 K 2	19 31 36·616	− 46·72	− 2·24	− 0·20	+70 49 36·16	+ 780·1	− 3·3	+ 5·7	12 14	28·57 27·86
1301	52 Sgtr	4·66 B 9	19 32 8·667	+364·76	− 0·53	+ 0·50	−25 3 0·96	+ 784·4	+24·3	− 2·3	5	26·05
1302	Gr. 2880	6·70 A 5	19 32 31·760	+170·80	− 0·04	− 0·21	+48 0 1·40	+ 787·5	+11·3	− 7·5	5	25·99
1303	Pi 19h, 180	5·87 K 0	19 32 42·315	+348·14	− 0·40	+ 0·10	−18 23 55·19	+ 788·9	+23·2	− 1·3	6 7	26·91 27·16
1304	κ Aqil	5·04 B 0	19 32 51·385	+322·79	− 0·23	+ 0·00	− 7 11 43·14	+ 790·1	+21·5	− 0·7	42 96	27·60 28·09
1305	BD + 21°, 3849	6·80 A 3	19 33 52·751	+258·16	+ 0·03	+ 0·16	+21 50 13·19	+ 798·3	+17·1	− 0·9	5 7	25·19 25·34

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1291. $5^m.8$ to $7^m.2$.

* 1297. K 0 + A 0.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1306	θ Cygn	4·64 F 5	19 34 25·761	+161·11	− 0·08	− 0·28	+50 2 48·99	+ 802·7	+10·6	+25·0	5 4	26·21 25·36
1307	BD + 3°, 4097	6·37 B 3	19 35 3·679	+300·42	− 0·11	− 0·06	+ 3 12 36·76	+ 807·8	+19·9	+ 0·4	7 8	25·86 25·95
1308	Gr. 2907	5·86 F 5	19 36 59·972	+134·58	− 0·22	+ 0·44	+54 47 50·92	+ 823·3	+ 8·8	+16·6	9 12	25·02 25·09
1309	Br. 2500	6·26 B 9	19 38 41·670	+281·43	− 0·04	− 0·05	+12 0 58·13	+ 836·8	+18·5	− 0·6	18 20	25·17 25·16
1310	δ Cygn	2·97 A 0	19 42 37·774	+187·05	+ 0·01	+ 0·42	+44 56 49·31	+ 867·9	+12·1	+ 4·0	7 8	25·48 25·37
1311	γ Aqil	2·80 K 2	19 42 41·606	+285·11	− 0·05	+ 0·09	+10 25 46·63	+ 868·4	+18·5	− 0·1	24 56	26·57 27·93
1312	δ Sgte	3·78 *	19 44 2·543	+267·45	+ 0·01	+ 0·03	+18 20 53·53	+ 879·0	+17·3	+ 0·9	21 47	28·39 28·35
1313	CD − 29°, 16546	6·10 F 0	19 44 30·913	+373·71	− 0·70	+ 0·89	−28 58 28·10	+ 882·8	+24·3	−10·9	6 8	26·93 27·37
1314	BD + 25°, 3972	6·04 K 0	19 44 39·916	+250·85	+ 0·04	+ 0·56	+25 11 52·01	+ 883·9	+16·2	− 2·7	8 11	26·58 26·49
1315	BD + 7°, 4252	6·39 B 3	19 46 39·111	+291·11	− 0·08	+ 0·00	+ 7 42 43·84	+ 899·5	+18·8	+ 0·0	9 10	25·17 25·11
1316	α Aqil	0·89 A 5	19 47 7·503	+289·09	− 0·07	+ 3·62	+ 8 40 10·66	+ 903·2	+18·6	+38·2	35 74	27·26 27·94
1317	BD − 3°, 4742	5·64 *	19 49 23·064	+314·14	− 0·21	+ 0·06	− 3 18 34·91	+ 920·8	+20·1	+ 1·6	8 9	25·23 25·28
1318	CD − 24°, 15668	6·28 K 0	19 49 48·342	+360·40	− 0·60	− 1·00	−24 7 42·61	+ 924·1	+23·1	−41·5	7	26·00
1319	Br. 2531	5·78 B 3	19 50 34·055	+324·81	− 0·29	+ 0·02	− 8 25 25·37	+ 930·0	+20·8	− 2·4	7	27·72
1320	BD + 34°, 3778	6·82 A 0	19 50 57·365	+226·34	+ 0·07	+ 0·02	+34 23 14·10	+ 933·0	+14·4	− 0·7	7 8	25·62 25·76
1321	Gr. 2964	6·82 B 3	19 51 5·428	+203·92	+ 0·05	− 0·03	+41 9 33·99	+ 934·0	+13·0	− 1·5	5 6	27·58 27·40
1322	β Aqil	3·90 K 0	19 51 37·723	+294·41	− 0·10	+ 0·25	+ 6 13 4·98	+ 938·2	+18·8	−48·3	49 106	27·62 28·00
1323	Pi 19h, 371	5·13 K 2	19 54 29·538	+114·77	− 0·44	− 0·15	+58 38 43·15	+ 960·2	+ 7·1	− 2·1	8	25·70 25·80
1324	γ Sgte	3·71 K 5	19 55 25·251	+266·32	+ 0·01	+ 0·43	+19 17 15·12	+ 967·4	+16·8	+ 2·4	57 130	27·76 27·90
1325	BD + 0°, 4375	6·35 G 5	19 55 33·908	+304·89	− 0·17	+ 0·12	+ 1 10 17·54	+ 968·5	+19·2	+ 5·3	6 5	26·40 26·57
1326	BD + 10°, 4126	6·55 K 0	19 55 38·680	+284·33	− 0·06	+ 0·07	+11 6 2·52	+ 969·1	+17·9	+ 0·6	2 5	27·06 26·80
1327	Br. 2553	5·70 F 0	19 55 57·347	+257·91	+ 0·04	− 0·55	+22 53 46·67	+ 971·5	+16·2	+ 0·5	5 6	26·63 26·79
1328	62 Sgtr	4·60 M 3	19 58 2·911	+368·90	− 0·74	+ 0·26	−27 55 9·63	+ 987·4	+23·2	+ 1·6	11	25·26 25·18
1329	BD + 29°, 3872	5·68 K 0	20 0 32·286	+241·37	+ 0·07	+ 5·18	+29 41 44·60	+1006·3	+15·0	−53·2	13 14	25·04 25·17
1330	Pi 19h, 377	7·11 G 5	20 0 33·340	+352·86	− 0·58	+ 0·33	−21 31 34·41	+1006·4	+22·0	− 3·2	6	25·08
1331	CD − 27°, 14515	7·08 A 0	20 0 37·580	+366·22	− 0·73	+ 0·04	−27 1 34·37	+1007·0	+22·9	− 0·1	6 7	30·67 29·24
1332	η Sgte	5·26 K 0	20 1 49·841	+265·87	+ 0·02	+ 0·17	+19 46 30·33	+1016·1	+16·5	+ 7·9	9 10	25·09 25·03
1333	BD + 47°, 3004	5·98 A 0	20 2 14·107	+179·41	− 0·02	+ 0·06	+48 0 56·48	+1019·1	+11·0	+ 0·1	6 7	27·60 27·17
1334	BD − 4°, 5013	6·56 K 0	20 2 15·080	+315·92	− 0·25	+ 0·27	− 4 17 34·43	+1019·2	+19·6	− 4·4	7	25·62
1335	Br. 2573	5·52 K 0	20 3 34·481	+224·68	+ 0·08	− 1·92	+35 45 54·84	+1029·2	+13·8	−43·8	10 11	24·83 25·00
1336	BD + 8°, 4344	6·5 F 5	20 4 13·484	+288·78	− 0·08	+ 0·28	+ 9 10 51·39	+1034·1	+17·8	+ 2·2	9 10	25·30 25·34
1337	Br. 2586	5·57 K 0	20 4 21·373	+ 94·06	− 0·71	+ 1·69	+61 46 38·85	+1035·0	+ 5·7	+ 7·2	10 11	28·79 28·68
1338	θ Aqil	3·37 A 0	20 7 26·122	+309·35	− 0·21	+ 0·23	− 1 2 41·73	+1058·0	+18·9	+ 0·5	49 103	27·73 27·80
1339	Br. 2577	5·88 F 5	20 8 15·196	+333·09	− 0·42	+ 1·31	−12 50 17·76	+1064·1	+20·3	−19·4	9	25·16
1340	Gr. 3087	6·35 K 2	20 10 26·455	+167·09	− 0·08	− 0·16	+51 14 14·58	+1080·3	+10·0	− 1·5	6 7	25·46 25·61
1341	Gr. 3212	6·61 A 2	20 10 29·710	−851·58	−54·18	− 0·81	+84 27 10·00	+1080·7	−52·5	− 4·3	14 20	30·85 30·70
1342	Gr. 3112	6·79 B 3	20 10 36·774	+ 28·15	− 1·77	− 0·23	+68 2 48·30	+1081·5	+ 1·5	− 0·3	6 7	30·62 29·91
1343	BD + 4°, 4395	6·57 G 5	20 12 22·123	+298·76	− 0·14	− 0·33	+ 4 21 3·69	+1094·4	+18·0	− 5·5	14 15	25·14 25·24
1344	α^1 Capr	4·55 G 0	20 13 29·495	+332·51	− 0·43	+ 0·11	−12 44 27·42	+1102·6	+20·0	+ 0·4	4	28·36
1345	α^2 Capr	3·77 G 5	20 13 53·665	+332·56	− 0·43	+ 0·41	−12 46 41·42	+1105·6	+20·0	+ 0·5	22 39	27·54 27·62
1346	σ Capr	5·46 K 0	20 15 4·037	+346·30	− 0·58	+ 0·03	−19 21 12·85	+1114·1	+20·7	− 0·7	5 6	25·20 25·45
1347	Br. 2616	5·18 F 5	20 15 46·095	+230·38	+ 0·10	+ 0·01	+34 44 51·21	+1119·2	+13·7	− 0·9	10 12	25·40 25·52
1348	BD − 6°, 5451	6·66 K 5	20 16 26·577	+320·08	− 0·32	− 0·55	− 6 35 48·83	+1124·1	+19·1	− 8·3	6 5	27·14 27·03
1349	β Capr	3·25 *	20 16 47·940	+336·94	− 0·48	+ 0·27	−15 1 8·93	+1126·7	+20·1	+ 0·3	24 52	27·44 27·93
1350	BD + 14°, 4263	6·34 G 5	20 16 51·198	+279·05	− 0·03	− 0·08	+14 19 54·24	+1127·1	+16·6	+ 0·7	6 5	26·84 27·04

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1312. M 0 + A 0.
* 1317. F 0 + A.
* 1349. G 0 + A 0.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +	
			h m s	s	s	s	° ′ ″	″	″	″			
1351	BD + 25°, 4215...	7·10 K 2	20 19 22·168	+253·65	+ 0·07	− 0·01	+26 3 26·75	+1145·2	+14·9	− 1·1	6	25·92	
1352	γ Cygn.....	2·32 F 8	20 19 32·084	+215·25	+ 0·10	+ 0·01	+40 0 57·60	+1146·4	+12·6	+ 0·0	8 9	27·58	27·21
1353	Gr. 3157.....	6·33 K 0	20 20 20·350	+206·23	+ 0·08	+ 0·44	+42 44 26·44	+1152·1	+12·1	+ 3·5	6 8	28·30	27·50
1354	CD − 29°, 17049..	5·97 K 0	20 20 51·450	+367·57	− 0·89	+ 0·09	−28 54 25·81	+1155·9	+21·6	+ 0·6	4 5	28·14	28·07
1355	BD + 16°, 4259...	6·17 K 0	20 22 57·553	+273·98	+ 0·00	+ 0·06	+17 4 9·57	+1170·8	+16·0	− 1·6	5 6	25·99	25·94
1356	π Capr.....	5·20 B 8	20 23 1·787	+343·48	− 0·58	+ 0·08	−18 27 30·47	+1171·3	+20·1	− 1·0	5	27·05	
1357	CD − 26°, 15036..	6·56 F 8	20 23 31·715	+359·75	− 0·80	+ 0·14	−25 51 17·47	+1174·9	+21·0	+ 3·2	4 5	29·44	29·47
1358	BD + 7°, 4477....	6·26 K 0	20 24 28·484	+291·75	− 0·10	+ 0·24	+ 8 11 17·63	+1181·6	+16·9	+ 1·5	5 7	25·03	25·22
1359	Gr. 3191.....	6·21 A 0	20 24 34·789	+144·92	− 0·26	+ 0·13	+56 23 27·46	+1182·3	+ 8·3	+ 0·9	5	27·43	
1360	Pi 20h, 146.....	6·22 K 5	20 25 7·447	+352·21	− 0·70	+ 0·08	−22 38 27·43	+1186·1	+20·4	− 2·6	6 5	28·85	28·87
1361	Pi 20h, 174.....	5·81 G 5	20 28 17·561	+326·29	− 0·40	+ 2·05	−10 6 36·35	+1208·4	+18·7	+10·2	6	25·62	
1362	BD + 48°, 3148...	6·54 A 2	20 28 33·871	+184·91	+ 0·02	− 0·01	+48 57 34·74	+1210·3	+10·5	− 0·6	3	27·66	
1363	Br. 2647.....	5·57 M 0	20 28 59·813	+185·06	+ 0·02	+ 0·07	+48 57 59·49	+1213·3	+10·5	− 3·0	2	27·67	
1364	ε Dlph.....	3·98 B 5	20 29 37·744	+286·56	− 0·06	+ 0·05	+11 2 51·06	+1217·7	+16·3	− 2·2	20 32	26·40	26·47
1365	BD + 4°, 4486....	6·68 K 0	20 30 15·900	+298·68	− 0·15	+ 0·03	+ 4 38 30·19	+1222·1	+17·0	− 0·6	8	25·73	
1366	β Dlph.....	3·72 F 5	20 34 1·894	+280·56	− 0·02	+ 0·73	+14 20 0·18	+1248·0	+15·7	− 3·4	30 42	26·60	26·26
1367	BD + 12°, 4418...	7·9 K 0	20 34 43·948	+283·07	− 0·04	+ 0·80	+13 3 56·80	+1253·2	+15·9	+ 9·2	1	24·65	
1368	BD − 5°, 5335....	6·62 K 0	20 35 8·426	+316·75	− 0·32	− 0·02	− 5 11 38·39	+1255·6	+17·7	+ 2·1	7	26·92	
1369	θ Dlph.....	6·06 K 5	20 35 11·559	+283·14	− 0·04	− 0·04	+13 3 3·50	+1256·0	+15·8	− 0·4	8 10	28·01	27·65
1370	Br. 2668.....	5·04 B 5	20 35 15·782	+261·24	+ 0·08	+ 0·04	+23 51 7·45	+1256·4	+14·6	− 0·2	6	26·32	
1371	α Dlph.....	3·86 B 8	20 36 9·210	+278·21	− 0·00	+ 0·43	+15 38 47·90	+1262·5	+15·5	− 0·3	24 33	27·30	26·84
1372	BD + 83°, 588....	6·16 A 2	20 36 42·280	−583·61	−38·96	+ 1·39	+83 22 2·73	+1266·2	−33·2	− 1·6	5 7	28·59	28·70
1373	Br. 2675.....	5·9 *	20 38 0·294	+242·75	+ 0·13	+ 0·02	+32 2 22·91	+1275·0	+13·4	− 1·5	6 7	26·52	26·40
1374	α Cygn.....	1·33 A 2	20 38 52·362	+204·45	+ 0·11	− 0·02	+45 0 42·61	+1280·9	+11·2	+ 0·2	6 7	26·02	25·47
1375	BD + 78°, 716....	6·78 B 3	20 39 0·066	−229·53	−12·55	− 0·34	+79 9 55·37	+1281·8	−13·1	+ 0·8	9 12	28·36	28·39
1376	BD + 19°, 4501...	7·07 A 5	20 41 24·375	+269·78	+ 0·05	− 0·06	+20 13 4·77	+1297·9	+14·7	− 3·9	7 10	24·96	25·28
1377	ψ Capr.....	4·26 F 8	20 41 39·440	+355·90	− 0·85	− 0·41	−25 32 28·22	+1299·5	+19·5	−15·6	4 3	25·42	25·63
1378	ε Cygn.....	2·64 K 0	20 43 10·516	+239·84	+ 0·15	+ 2·85	+33 41 19·02	+1309·6	+13·0	+32·4	6 7	27·60	27·21
1379	ε Aqar.....	3·83 A 0	20 43 37·032	+324·67	− 0·42	+ 0·19	− 9 46 16·27	+1312·5	+17·6	− 3·3	38 65	28·16	28·90
1380	Br. 2688.....	5·59 A 0	20 44 5·392	+297·16	− 0·13	+ 0·03	+ 5 43 55·06	+1315·6	+16·1	− 0·4	5 7	25·41	25·64
1381	Gr. 3285.....	6·43 K 0	20 44 10·627	+174·88	− 0·02	− 0·91	+52 43 18·11	+1316·2	+ 9·3	−10·8	6	27·16	27·63
1382	BD + 27°, 3868...	6·95 A 5	20 44 40·704	+255·32	+ 0·12	+ 0·09	+27 19 7·22	+1319·5	+13·7	− 1·6	6	28·18	
1383	Pi 20h, 305.....	5·78 B 8	20 44 50·599	+356·44	− 0·87	+ 0·10	−26 3 31·80	+1320·6	+19·3	− 2·3	5	27·68	
1384	BD − 1°, 4057....	6·53 M 3	20 45 25·862	+308·75	− 0·24	− 0·25	− 0 50 28·08	+1324·5	+16·6	− 0·9	4 6	28·67	28·68
1385	Pi 20h, 325.....	5·99 K 0	20 46 33·865	+330·01	− 0·49	+ 0·83	−12 49 25·33	+1331·9	+17·7	− 7·0	4	29·39	
1386	BD − 21°, 5844...	7·07 F 5	20 46 34·285	+346·80	− 0·73	+ 0·07	−21 35 27·96	+1331·9	+18·6	− 8·6	4	30·23	
1387	Br. 2702.....	5·07 A 5	20 47 24·975	+211·91	+ 0·15	+ 1·13	+43 46 34·35	+1337·5	+11·2	+13·4	4	29·90	
1388	BD + 63°, 1663...	6·38 B 0	20 47 58·452	+105·78	− 0·82	− 0·17	+63 45 43·39	+1341·1	+ 5·4	− 0·6	6	30·72	
1389	76 Drac.....	5·69 A 0	20 48 6·941	−422·55	−27·64	+ 1·49	+82 15 17·73	+1342·0	−23·2	+ 2·5	237 224	29·10	28·18
1390	BD + 36°, 4314...	7·24 A 0	20 51 46·112	+234·13	+ 0·18	+ 0·10	+36 47 14·36	+1365·6	+12·2	− 1·0	5	26·42	
1391	Br. 2708.....	5·39 K 0	20 52 3·562	+283·94	− 0·02	+ 0·07	+13 26 4·07	+1367·4	+14·8	− 1·2	7 9	28·66	28·23
1392	Pi 20h, 386.....	5·95 A 3	20 53 28·824	+335·73	− 0·59	+ 0·33	−16 19 15·82	+1376·5	+17·5	+ 0·0	7 8	26·96	26·65
1393	BD + 3°, 4466....	6·88 K 2	20 54 3·375	+300·66	− 0·16	− 0·02	+ 3 54 20·18	+1380·1	+15·6	− 0·1	11	25·48	25·50
1394	υ Cygn.....	4·04 A 0	20 54 22·495	+223·51	+ 0·19	+ 0·07	+40 52 40·19	+1382·2	+11·5	− 1·6	6 7	26·16	26·10
1395	Br. 2719.....	5·57 K 5	20 54 55·075	+268·20	+ 0·09	− 0·06	+22 2 6·83	+1385·6	+13·8	+ 0·4	5 9	25·04	25·36

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

* 1373. K 0 + A.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1396	Br. 2735.....	5·24 B 3	20 58 33·678	+209·30	+ 0·18	+ 0·03	+45 51 38·30	+1408·5	+10·6	+ 0·7	17	25·19
1397	Gr. 3375.....	6·70 B 8	20 59 52·740	+162·94	− 0·10	− 0·11	+56 46 31·39	+1416·6	+ 8·1	+ 0·7	7	25·13
1398	BD + 67°, 1283...	7·20 B 5	21 0 40·834	+ 75·66	− 1·50	+ 0·10	+67 51 59·60	+1421·6	+ 3·6	+ 0·8	10 11	28·77 28·38
1399	BD − 0°, 4161....	7·10 K 2	21 2 42·448	+307·94	− 0·24	+ 0·01	− 0 24 22·53	+1434·0	+15·4	− 0·3	8 11	26·78 26·50
1400	BD + 26°, 4073...	6·23 K 2	21 3 7·640	+260·56	+ 0·15	+ 0·25	+26 37 24·67	+1436·6	+12·9	− 1·7	7 6	25·92 25·95
1401	BD + 30°, 4318...	* F 5	21 3 21·330	+251·60	+ 0·19	− 0·04	+30 52 59·34	+1438·0	+12·5	− 0·3	7 8	26·40 26·55
1402	BD + 15°, 4340...	6·52 K 0	21 4 1·942	+281·79	+ 0·02	+ 0·28	+15 21 25·67	+1442·1	+14·0	− 5·8	9	27·14
1403	χ Capr.....	5·27 A 0	21 4 16·007	+343·79	− 0·76	+ 0·12	−21 29 44·67	+1443·5	+17·1	− 5·7	5 7	28·71 28·44
1404	CD − 28°, 17136..	6·95 G 5	21 4 30·079	+358·15	− 1·03	+ 0·30	−28 46 42·02	+1444·9	+17·8	−13·5	6	30·57
1405	BD + 6°, 4754....	6·38 K 5	21 4 45·848	+296·44	− 0·11	− 0·11	+ 6 41 8·11	+1446·5	+14·6	+ 0·0	5	27·64 27·07
1406	ν Aqar.....	4·52 K 0	21 5 30·607	+326·33	− 0·49	+ 0·62	−11 40 33·87	+1451·0	+16·1	− 1·2	27 41	28·47 28·80
1407	ζ Cygn.....	3·40 K 0	21 9 44·558	+255·26	+ 0·20	− 0·02	+29 55 7·44	+1476·3	+12·3	− 5·6	7 9	25·49 25·56
1408	BD − 6°, 5720....	7·18 K 2	21 11 6·681	+316·50	− 0·35	− 0·11	− 5 51 45·74	+1484·4	+15·2	− 2·6	7	25·68
1409	α Equl.....	4·14 *	21 12 4·485	+299·56	− 0·14	+ 0·36	+ 4 56 12·87	+1490·1	+14·3	− 8·7	24 30	27·84 28·42
1410	BD + 24°, 4357...	7·06 G 5	21 12 38·215	+265·48	+ 0·16	− 0·49	+25 7 17·11	+1493·3	+12·6	− 3·5	5 4	27·23 27·14
1411	Br. 2765.....	5·39 B 8	21 13 45·029	+336·60	− 0·68	+ 0·10	−18 18 0·86	+1499·8	+16·0	+ 0·0	5	27·62
1412	Gr. 3548.....	7·36 A 3	21 14 36·640	−1237·44	−177·48	+ 1·99	+86 43 44·79	+1504·8	−59·9	+ 1·6	110 101	29·03 27·66
1413	BD + 10°, 4516...	6·32 K 5	21 15 14·078	+290·35	− 0·03	+ 0·21	+10 53 11·93	+1508·4	+13·6	+ 1·5	4 7	25·12 25·33
1414	Br. 2775.....	5·06 O 5	21 15 39·199	+223·56	+ 0·28	− 0·01	+43 37 46·90	+1510·8	+10·4	− 0·9	6	27·29
1415	BD + 37°, 4271...	5·83 F 2	21 16 22·560	+239·11	+ 0·28	+ 0·06	+37 55 12·96	+1515·0	+11·1	− 0·6	3	26·72
1416	α Ceph.....	2·60 A 5	21 16 47·443	+141·19	− 0·37	+ 2·12	+62 16 3·63	+1517·3	+ 6·4	+ 5·0	8 9	29·92 30·16
1417	Gr. 3434.....	6·81 K 2	21 17 15·909	+192·76	+ 0·18	+ 0·08	+52 44 24·65	+1520·0	+ 8·8	− 0·4	4 6	28·14 28·34
1418	BD + 3°, 4551....	6·92 K 0	21 18 15·743	+301·18	− 0·15	+ 0·21	+ 4 1 32·44	+1525·7	+13·9	− 0·7	6	26·48
1419	1 Pegs.....	4·27 K 0	21 18 37·007	+276·67	+ 0·10	+ 0·74	+19 28 58·89	+1527·7	+12·7	+ 6·5	29 59	28·37 28·94
1420	Br. 2781.....	5·54 A 5	21 20 5·625	+327·42	− 0·53	+ 0·61	−13 12 2·28	+1536·0	+15·0	+ 1·1	4 5	25·44 25·71
1421	Br. 2784.....	5·69 K 0	21 21 22·297	+313·06	− 0·31	− 0·12	− 3 52 44·50	+1543·2	+14·2	− 7·1	7	25·53
1422	BD + 18°, 4794...	6·06 A 3	21 22 57·534	+278·08	+ 0·10	+ 0·54	+19 03 0·26	+1552·0	+12·5	+ 1·4	7 9	25·20 25·23
1423	BD + 7°, 4696....	6·66 M 0	21 24 42·988	+295·70	− 0·07	− 0·03	+ 7 52 7·01	+1561·7	+13·2	− 2·9	4 6	27·12 26·96
1424	Pi 21h, 145.....	6·54 F 2	21 25 47·157	+336·73	− 0·72	+ 0·22	−19 28 32·63	+1567·5	+15·0	− 4·3	5 5	29·27 29·08
1425	BD + 34°, 4436...	7·17 A 0	21 26 59·022	+249·04	+ 0·30	− 0·12	+35 8 34·17	+1574·1	+10·9	− 1·6	4	25·87
1426	β Aqar.....	3·07 G 0	21 27 36·745	+315·80	− 0·35	+ 0·11	− 5 54 6·51	+1577·5	+13·9	− 0·6	6 8	26·28 26·87
1427	β Ceph.....	3·33 B 1	21 27 41·848	+ 77·98	− 1·78	+ 0·20	+70 13 53·00	+1577·9	+ 3·2	+ 1·0	9	30·83
1428	Pi 21h, 161.....	6·42 A 5	21 28 14·188	+345·46	− 0·91	+ 0·49	−24 55 21·19	+1580·8	+15·1	+ 1·9	3	28·34
1429	BD + 22°, 4431...	6·37 F 8	21 31 8·255	+273·93	+ 0·17	+ 0·07	+22 25 16·56	+1596·3	+11·7	− 4·0	11 13	25·51 25·53
1430	BD + 11°, 4613...	7·20 A 0	21 33 27·934	+291·23	+ 0·00	+ 0·05	+11 22 56·07	+1608·5	+12·3	+ 0·3	8 9	25·61 25·63
1431	BD + 49°, 3562...	7·00 B 9	21 33 30·514	+211·72	+ 0·35	+ 0·24	+50 9 54·66	+1608·7	+ 8·9	+ 2·4	6	26·70
1432	ξ Aqar.....	4·78 A 5	21 33 45·636	+318·74	− 0·41	+ 0·74	− 8 11 28·35	+1610·1	+13·5	− 2·2	41 68	28·28 28·34
1433	Br. 2830.....	4·87 B 2	21 35 54·378	+161·06	− 0·08	− 0·05	+61 44 36·07	+1621·2	+ 6·6	− 0·1	13 12	27·64 27·42
1434	γ Capr.....	3·80 F 0	21 35 56·310	+331·31	− 0·65	+ 1·29	−17 0 6·73	+1621·3	+13·9	− 2·1	7 6	28·01 27·89
1435	Gr. 3550.....	6·95 K 0	21 38 19·600	+176·27	+ 0·12	+ 0·82	+59 24 39·23	+1633·5	+ 7·1	+ 2·7	10	26·76
1436	Br. 2822.....	5·80 K 5	21 38 20·644	+306·01	− 0·19	− 0·03	+ 0 56 35·12	+1633·6	+12·6	− 0·4	9 11	26·90 27·15
1437	BD + 45°, 3637...	6·47 M 3	21 39 16·158	+229·14	+ 0·41	+ 0·03	+45 25 24·07	+1638·3	+ 9·3	− 1·3	4 7	28·28 28·47
1438	BD + 6°, 4889....	6·74 K 0	21 39 56·648	+297·61	− 0·07	− 0·20	+ 7 11 8·91	+1641·7	+12·1	− 5·7	5	26·27
1439	ε Pegs.....	2·54 K 0	21 40 30·116	+294·45	− 0·02	+ 0·17	+ 9 31 50·02	+1644·5	+11·9	+ 0·2	36 58	27·87 28·05
1440	BD + 35°, 4626...	6·60 K 0	21 42 33·570	+253·46	+ 0·37	+ 0·76	+35 30 39·10	+1654·7	+10·1	+ 0·6	6 7	26·42 26·47

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch

* 1401. $5^m.7$ to $5^m.9$.

* 1409. F 8 + A 3.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1441	BD − 2°, 5631....	7·16 M 3	21 42 38·796	+310·65	− 0·27	+ 0·13	− 2 33 36·31	+1655·1	+12·4	+ 2·4	5 6	25·61 25·79
1442	δ Capr.....	2·98 A 5	21 42 54·248	+329·53	− 0·63	+ 1·81	−16 28 6·34	+1656·4	+13·2	−29·3	36 48	28·08 28·16
1443	Br. 2853.....	6·24 F 0	21 43 30·634	+284·58	+ 0·12	+ 0·62	+16 50 48·21	+1659·4	+11·3	− 1·4	6 7	25·68
1444	CD − 27°, 15639..	7·15 A 0	21 45 34·515	+346·20	− 1·03	+ 0·21	−27 45 12·43	+1669·5	+13·6	− 1·3	5 4	26·91 27·45
1445	BD + 40°, 4648...	6·49 A 0	21 46 36·841	+243·88	+ 0·44	− 0·07	+40 47 55·03	+1674·5	+ 9·4	− 0·5	8	25·06
1446	CD − 23°, 17135..	6·85 F 8	21 47 8·721	+339·29	− 0·87	+ 2·48	−23 37 12·60	+1677·0	+13·2	− 8·8	6 6	26·93 27·10
1447	μ Capr.....	5·18 F 0	21 49 12·576	+325·15	− 0·55	+ 2·11	−13 54 19·34	+1686·8	+12·4	+ 1·2	47 69	27·68 28·25
1448	Gr. 3600.....	7·01 K 0	21 49 51·154	+207·15	+ 0·43	+ 0·29	+54 19 46·39	+1689·9	+ 7·8	+ 2·1	5 4	26·83 26·38
1449	BD + 31°, 4577...	7·10 K 5	21 51 36·899	+262·94	+ 0·37	− 0·11	+31 59 0·51	+1698·1	+ 9·8	+ 0·4	5 6	25·26 25·49
1450	BD + 20°, 5046...	6·62 K 5	21 52 53·443	+280·43	+ 0·21	− 0·02	+20 52 58·15	+1704·0	+10·4	+ 1·7	6 7	25·16 25·24
1451	Br. 2894.....	6·80 K 5	21 53 3·992	− 61·05	− 9·42	+ 0·30	+79 11 48·24	+1704·8	− 2·7	+ 2·2	8 9	28·95 29·08
1452	Br. 2869.....	5·59 A 2	21 53 16·870	+292·72	+ 0·04	− 0·23	+11 43 10·96	+1705·8	+10·8	− 1·0	16 19	27·94 27·42
1453	BD + 3°, 4644....	7·07 F 8	21 54 42·270	+303·13	− 0·12	− 1·73	+ 3 25 17·10	+1712·3	+11·1	−13·7	5 4	25·49 25·48
1454	BD − 5°, 5674....	6·42 K 0	21 55 0·311	+313·01	− 0·31	− 0·02	− 4 43 36·64	+1713·7	+11·5	−25·7	6 7	25·53 25·69
1455	Gr. 3637.....	6·28 B 3	21 55 15·995	+153·34	− 0·17	+ 0·06	+65 47 52·79	+1714·9	+ 5·4	+ 0·4	7 9	28·72 27·89
1456	Pi 21h, 361.....	6·38 G 5	21 58 4·250	+329·65	− 0·68	+ 0·80	−18 15 50·23	+1727·4	+11·8	− 5·5	10 13	25·09 25·08
1457	BD + 9°, 4975....	6·98 K 0	22 0 49·415	+295·72	+ 0·02	− 0·40	+ 9 52 35·77	+1739·5	+10·3	− 1·0	7	25·89 26·16
1458	Br. 2887.....	5·23 A 3	22 0 55·996	+308·75	− 0·22	− 0·14	− 1 16 10·39	+1740·0	+10·8	− 4·8	7 8	26·71 26·60
1459	α Aqar.....	3·19 G 0	22 1 55·929	+308·07	− 0·20	+ 0·10	− 0 41 4·98	+1744·3	+10·7	− 0·5	41 71	28·43 28·46
1460	Br. 2895.....	5·58 A 0	22 2 10·582	+271·45	+ 0·37	+ 0·16	+28 35 56·44	+1745·4	+ 9·4	− 1·0	4	25·36
1461	Pi 21h, 393.....	6·89 G 5	22 3 4·528	+334·45	− 0·83	+ 0·10	−22 36 25·47	+1749·2	+11·5	+ 2·1	6 5	27·72 27·70
1462	BD + 17°, 4693...	6·43 M 0	22 3 54·647	+286·67	+ 0·18	+ 0·14	+17 38 4·96	+1752·8	+ 9·8	− 3·9	7 7	27·69 27·27
1463	BD + 45°, 3813...	6·52 G 5	22 5 38·863	+242·50	+ 0·60	− 0·28	+45 22 24·10	+1760·1	+ 8·1	+ 3·1	6	26·91
1464	θ Pegs.....	3·70 A 2	22 6 25·020	+300·79	− 0·05	+ 1·82	+ 5 49 42·18	+1763·3	+10·0	+ 3·0	40 65	28·04 28·25
1465	Br. 2909.....	5·40 B 5	22 6 36·960	+320·69	− 0·48	+ 0·19	−11 56 3·09	+1764·1	+10·7	+ 1·2	6 9	26·83 26·56
1466	ζ Ceph.....	3·62 K 0	22 8 14·911	+207·74	+ 0·58	+ 0·17	+57 49 52·59	+1770·9	+ 6·7	+ 0·6	5 6	25·78 26·27
1467	CD − 26°, 16033..	6·16 A 2	22 8 44·067	+338·64	− 0·98	− 0·17	−26 41 53·64	+1772·9	+11·1	− 3·2	5 6	28·34 27·91
1468	BD − 16°, 6046...	6·60 G 5	22 10 34·650	+325·10	− 0·60	+ 0·09	−16 11 1·35	+1780·3	+10·5	−35·0	4	26·49
1469	BD + 3°, 4687....	7·06 K 0	22 10 59·565	+303·10	− 0·08	− 0·02	+ 3 54 33·12	+1782·0	+ 9·7	+ 2·1	6 7	25·52 25·38
1470	BD + 21°, 4719...	6·69 K 0	22 11 16·487	+282·43	+ 0·29	− 0·03	+22 9 2·49	+1783·1	+ 9·0	− 0·4	6 7	27·37 27·42
1471	Gr. 3725.....	5·70 A 0	22 11 35·076	+251·33	+ 0·62	+ 0·46	+42 34 52·94	+1784·3	+ 8·0	− 2·0	5	26·78
1472	θ Aqar.....	4·32 K 0	22 12 52·648	+319·51	− 0·37	+ 0·77	− 8 9 26·09	+1789·5	+10·0	− 1·8	37 60	27·84 28·20
1473	Br. 2931.....	5·80 G 5	22 13 11·642	+313·34	− 0·31	+ 0·00	− 5 45 43·67	+1790·7	+ 9·9	+ 2·5	5 6	27·51 27·72
1474	BD + 12°, 4797...	6·94 G 0	22 13 30·385	+293·98	+ 0·11	+ 5·77	+12 31 18·21	+1791·9	+ 9·2	+ 9·8	4 3	29·24 29·72
1475	Pi 22h, 65.....	6·11 F 0	22 15 38·695	+262·36	+ 0·57	+ 0·46	+37 23 31·70	+1800·2	+ 8·0	+ 4·5	6	25·68
1476	Br. 2947.....	5·99 K 5	22 15 45·665	+194·85	+ 0·55	+ 0·64	+62 25 41·74	+1800·7	+ 5·9	+ 1·8	8 8	28·32 27·69
1477	Gr. 3746.....	6·54 B 8	22 17 20·825	+219·71	+ 0·73	+ 0·04	+56 32 25·98	+1806·7	+ 6·5	+ 1·0	5	28·33
1478	BD + 30°, 4685...	7·65 K 0	22 17 36·937	+272·68	+ 0·47	− 0·11	+30 55 56·39	+1807·8	+ 8·2	− 2·6	6	28·04
1479	γ Aqar.....	3·97 A 0	22 17 46·998	+309·06	− 0·20	+ 0·84	− 1 45 56·30	+1808·4	+ 9·3	+ 1·1	6 9	28·68 27·83
1480	32H Ceph.....	5·38 A 0	22 19 30·351	−452·86	−71·49	+ 4·88	+85 43 53·19	+1814·8	−14·4	+ 5·0	110 94	30·35 29·26
1481	β Lacr.....	4·58 K 0	22 20 36·379	+235·79	+ 0·78	− 0·18	+51 51 10·12	+1818·9	+ 6·8	−18·8	5	28·94
1482	Pi 22h, 91.....	6·17 A 0	22 22 2·030	+332·02	− 0·86	+ 0·04	−24 3 49·79	+1824·1	+ 9·6	+ 0·4	4	30·29
1483	Gr. 3767.....	6·87 M 0	22 22 3·060	+239·19	+ 0·79	+ 0·54	+50 52 27·73	+1824·2	+ 6·8	+ 3·0	5	29·67
1484	BD + 17°, 4746...	6·40 K 0	22 22 3·425	+289·22	+ 0·24	+ 0·12	+18 3 44·84	+1824·2	+ 8·3	+ 3·3	4 3	29·50 29·41
1485	Br. 2962.....	5·82 M 2	22 25 23·342	+299·03	+ 0·06	+ 0·35	+ 8 44 44·55	+1836·1	+ 8·4	− 1·8	6	26·18

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1486	CD − 27°, 15932..	5·95 F 0	22 25 34·448	+335·13	− 0·99	+ 0·96	−27 29 28·40	+1836·7	+ 9·4	− 1·4	4	28·27
1487	Pi 22h, 120.....	5·96 K 2	22 25 39·202	+280·76	+ 0·42	+ 0·16	+26 22 45·19	+1837·0	+ 7·8	− 0·5	6	27·51 26·84
1488	σ Aqar.....	4·89 A 0	22 26 40·743	+317·63	− 0·43	− 0·01	−11 3 43·93	+1840·6	+ 8·8	− 2·8	27 45	28·70 28·57
1489	BD − 3°, 5460....	6·29 K 0	22 27 25·808	+310·30	− 0·22	− 0·15	− 3 17 45·00	+1843·2	+ 8·5	− 3·1	4 6	27·67 27·86
1490	Br. 2967.....	6·39 F 0	22 27 42·842	+317·74	− 0·44	+ 0·47	−11 17 24·94	+1844·1	+ 8·7	− 4·2	6 5	28·40 28·53
1491	Gr. 3804.....	5·80 A 3	22 29 7·166	+264·90	+ 0·69	+ 0·03	+39 23 36·94	+1848·9	+ 7·1	− 0·3	6 4	25·53 25·66
1492	η Aqar.....	4·13 B 8	22 31 30·158	+307·72	− 0·15	+ 0·58	− 0 30 15·99	+1856·9	+ 8·1	− 5·2	28 55	29·06 29·06
1493	Br. 2978.....	6·81 K 5	22 31 46·630	+323·44	− 0·63	− 0·23	−17 50 51·88	+1857·8	+ 8·5	− 3·9	7 6	27·34 27·27
1494	Gr. 3829.....	6·20 B 3	22 32 46·136	+248·78	+ 0·89	+ 0·03	+49 40 55·97	+1861·0	+ 6·3	+ 0·8	5	27·63
1495	BD + 23°, 4576...	6·93 A 3	22 33 58·743	+285·87	+ 0·40	− 0·24	+23 36 43·19	+1864·9	+ 7·2	− 0·9	7	26·04
1496	BD − 8°, 5912....	6·35 G 0	22 34 26·118	+314·38	− 0·34	+ 0·47	− 8 17 15·59	+1866·4	+ 8·0	+ 0·0	6	27·07
1497	Pi 22h, 186.....	5·81 G 5	22 37 9·585	+295·36	+ 0·21	+ 1·81	+14 9 17·32	+1874·9	+ 7·2	+14·5	5 5	25·97 26·34
1498	ζ Pegs.....	3·61 B 8	22 37 43·222	+298·63	+ 0·12	+ 0·52	+10 26 22·21	+1876·7	+ 7·2	− 0·8	36 68	28·02 28·23
1499	BD + 30°, 4771...	6·48 K 5	22 38 0·895	+279·64	+ 0·56	+ 0·46	+30 34 25·85	+1877·6	+ 6·7	+ 0·0	3	27·76
1500	BD + 4°, 4896....	7·30 K 2	22 39 5·132	+303·58	− 0·01	+ 0·16	+ 4 34 32·75	+1880·8	+ 7·2	+ 0·9	6 7	28·90 28·45
1501	η Pegs.....	3·10 G 0	22 39 28·944	+280·91	+ 0·55	+ 0·08	+29 49 43·38	+1882·0	+ 6·6	− 2·5	6 6	26·59 26·77
1502	Br. 3006.....	6·45 K 0	22 41 49·123	+291·91	+ 0·33	− 0·25	+18 58 14·68	+1889·0	+ 6·7	+ 5·7	9	25·08
1503	BD + 6°, 5060....	6·84 F 2	22 42 4·960	+301·70	+ 0·06	+ 0·33	+ 7 11 16·11	+1891·5	+ 6·9	+ 0·5	8 11	27·97 27·92
1504	λ Pegs.....	4·14 K 0	22 42 54·944	+288·40	+ 0·42	+ 0·38	+23 10 14·28	+1892·2	+ 6·5	− 1·2	12 15	25·02 25·03
1505	Br. 3007.....	5·43 G 5	22 43 31·505	+323·21	− 0·68	− 0·76	−20 0 17·55	+1893·9	+ 7·3	−20·0	6 8	27·59 27·62
1506	BD − 2°, 5826....	7·58 K 2	22 43 38·088	+308·95	− 0·16	− 0·01	− 2 11 3·74	+1894·2	+ 7·0	− 0·6	5 5	28·27 27·50
1507	Br. 3009.....	5·70 B 9	22 43 43·899	+318·53	− 0·50	+ 0·19	−14 27 7·16	+1894·5	+ 7·2	− 0·6	5	27·74
1508	CD − 26°, 16324..	6·48 G 5	22 43 49·448	+328·84	− 0·91	+ 0·82	−26 18 18·88	+1894·8	+ 7·4	−10·8	4 3	29·29 29·44
1509	ι Ceph.....	3·68 K 0	22 47 0·249	+214·14	+ 1·16	− 1·10	+65 48 20·38	+1903·7	+ 4·5	−12·2	11	27·33 26·83
1510	34H Ceph.....	4·97 K 0	22 47 49·391	− 18·37	−12·53	+ 1·24	+82 45 21·87	+1905·9	− 0·8	+ 5·3	9	28·33
1511	BD + 25°, 4828...	6·71 A 3	22 47 50·956	+287·11	+ 0·51	− 0·09	+25 59 34·52	+1906·0	+ 6·1	+ 0·8	8 8	26·38 25·88
1512	λ Aqar.....	3·84 M 0	22 48 42·134	+313·01	− 0·30	+ 0·03	− 7 58 44·33	+1908·3	+ 6·6	+ 4·0	41 67	28·10 27·90
1513	BD + 67°, 1475...	6·94 F 2	22 50 3·043	+209·90	+ 1·19	+ 1·38	+67 35 24·31	+1911·8	+ 4·2	+ 7·2	13 16	28·60 27·97
1514	δ Aqar.....	3·51 A 2	22 50 40·308	+318·86	− 0·54	− 0·29	−16 13 11·69	+1913·5	+ 6·5	− 2·1	6 7	25·10 25·06
1515	Br. 3026.....	5·66 K 0	22 50 47·425	+319·18	− 0·55	− 1·57	−16 40 11·13	+1913·8	+ 6·5	− 8·6	4 5	26·45 26·30
1516	BD + 36°, 4956...	6·00 F 2	22 51 33·084	+278·00	+ 0·78	+ 0·72	+36 40 36·17	+1915·7	+ 5·6	+ 0·9	7 7	26·35 25·94
1517	BD + 55°, 2850...	7·06 B 9	22 53 2·329	+250·11	+ 1·26	+ 0·09	+56 2 58·63	+1919·5	+ 4·8	+ 0·5	6	27·10
1518	BD + 11°, 4904...	6·46 A 3	22 53 6·401	+299·49	+ 0·19	+ 0·39	+11 26 51·51	+1919·7	+ 5·9	− 0·6	4 6	25·21 25·18
1519	α Psc. A.....	1·29 A 3	22 53 30·602	+329·37	− 1·03	+ 2·52	−30 1 11·88	+1920·7	+ 6·5	−16·4	6	25·75 25·67
1520	BD + 3°, 4799....	6·43 K 2	22 53 43·650	+305·11	+ 0·00	+ 0·42	+ 3 24 29·99	+1921·2	+ 5·9	+ 4·3	6	26·94
1521	Br. 3035.....	5·59 G 0	22 53 46·737	+293·14	+ 0·40	+ 1·42	+20 21 58·86	+1921·4	+ 5·7	+ 5·9	7	27·63 26·78
1522	36H Ceph.....	4·96 K 5	22 55 4·252	− 44·89	−17·47	+ 6·22	+83 56 42·31	+1924·6	− 1·3	+ 2·9	13 15	29·55 29·25
1523	Gr. 3940.....	6·41 K 2	22 55 55·059	+259·65	+ 1·21	− 0·37	+52 15 6·52	+1926·6	+ 4·8	+ 2·8	7	25·86
1524	Br. 3039.....	6·40 K 0	22 56 47·107	+307·42	− 0·08	+ 0·24	− 0 13 1·84	+1928·7	+ 5·7	+ 1·9	7 9	25·02 24·94
1525	Br. 3040.....	6·40 K 2	22 57 29·785	+312·00	− 0·27	− 0·14	− 7 27 50·77	+1930·4	+ 5·7	− 0·6	7 10	26·02 25·84
1526	ο Andr.....	3·63 *	22 58 27·896	+275·45	+ 0·96	+ 0·20	+41 55 22·12	+1932·7	+ 4·9	− 0·2	8 9	24·93 25·02
1527	BD + 62°, 2157...	7·31 K 2	22 58 33·050	+238·14	+ 1·49	+ 0·06	+62 53 20·21	+1932·9	+ 4·2	− 1·2	3	27·79
1528	BD − 21°, 6354...	6·19 G 5	22 58 44·133	+321·02	− 0·69	− 0·43	−21 16 17·98	+1933·3	+ 5·8	−11·5	5	26·41
1529	Gr. 3968.....	7·00 K 0	22 59 38·547	+239·19	+ 1·52	+ 0·39	+62 56 13·05	+1935·4	+ 4·1	+ 0·9	7 9	29·52 29·52
1530	β Pegs.....	2·61 M 0	23 0 8·063	+289·18	+ 0·60	+ 1·42	+27 40 32·87	+1936·5	+ 5·0	+13·9	1 3	24·72 26·74

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

*1526. B 5 + A 2.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1531	α Pegs	2·57 A 0	23 1 1·370	+298·29	+ 0·29	+ 0·40	+14 48 4·84	+1938·5	+ 5·1	− 4·1	36 57	27·66 27·71
1532	BD + 34°, 4847	6·54 K 0	23 3 30·930	+284·26	+ 0·81	+ 0·42	+35 13 50·23	+1943·9	+ 4·6	+ 0·0	7 8	25·18 25·25
1533	BD + 19°, 5060	6·74 K 0	23 3 43·771	+295·34	+ 0·43	− 0·09	+20 10 35·15	+1944·4	+ 4·8	− 3·3	4 5	26·48 26·73
1534	BD + 29°, 4862	7·25 B 9	23 4 3·137	+288·90	+ 0·67	− 0·21	+29 38 55·13	+1945·0	+ 4·7	− 0·4	5	27·55
1535	Br. 3063	5·56 K 5	23 4 13·163	+273·95	+ 1·12	− 0·16	+45 58 54·81	+1945·4	+ 4·4	− 3·0	6 7	25·89 25·73
1536	CD − 28°, 18099	6·06 K 0	23 5 41·691	+324·31	− 0·93	+ 0·17	−28 29 43·75	+1948·5	+ 5·1	+ 0·9	5 4	26·93 27·67
1537	Br. 3068	5·41 M 3	23 5 44·227	+302·72	+ 0·15	− 0·01	+ 8 16 13·29	+1948·5	+ 4·8	+ 0·6	6 8	28·42 27·76
1538	Br. 3070	5·85 F 5	23 6 58·898	+278·57	+ 1·06	− 1·80	+43 8 28·11	+1951·1	+ 4·2	−18·8	10 13	25·44 25·36
1539	φ Aqar	4·40 M 0	23 10 26·325	+310·52	− 0·21	+ 0·22	− 6 27 13·11	+1957·8	+ 4·4	−19·2	36 68	27·34 27·46
1540	BD − 11°, 6032	6·35 K 5	23 10 45·641	+312·87	− 0·34	− 0·05	−11 5 48·09	+1958·4	+ 4·4	− 3·0	5 6	25·69 25·54
1541	BD + 24°, 4737	6·74 K 0	23 11 42·067	+294·09	+ 0·59	+ 0·00	+25 15 46·60	+1960·1	+ 4·1	+ 1·7	6 7	27·09 26·75
1542	BD − 4°, 5852	5·55 A 2	23 11 42·412	+309·19	− 0·14	− 0·12	− 3 54 19·75	+1960·1	+ 4·3	+ 0·2	4	26·64
1543	γ Pisc	3·85 K 0	23 13 16·729	+305·92	+ 0·04	+ 5·05	+ 2 52 20·44	+1963·0	+ 4·1	+ 2·2	41 73	27·64 28·10
1544	CD − 29°, 18654	6·75 K 5	23 15 2·427	+321·60	− 0·91	+ 0·03	−28 47 53·48	+1966·0	+ 4·1	+ 2·5	3 7	27·06 26·61
1545	BD − 18°, 6283	6·08 K 0	23 15 27·362	+315·91	− 0·55	− 0·09	−18 29 9·74	+1966·7	+ 4·0	+ 2·2	4	26·44
1546	Br. 3092	5·18 K 0	23 16 31·262	+305·09	+ 0·10	+ 0·51	+ 4 58 18·50	+1968·5	+ 3·8	− 5·8	8 10	25·17 25·19
1547	Br. 3099	5·75 F 5	23 17 15·740	+288·08	+ 0·97	+ 0·98	+37 46 21·66	+1969·7	+ 3·5	− 6·6	11	26·31 25·92
1548	Br. 3110	5·93 K 5	23 19 11·259	+266·74	+ 1·84	+ 0·05	+59 43 19·26	+1972·8	+ 3·0	− 0·2	13 15	28·00 27·32
1549	Br. 3108	5·28 K 0	23 19 17·508	+302·30	+ 0·28	+ 0·15	+11 54 9·27	+1972·9	+ 3·5	− 1·4	10 12	25·35 25·33
1550	Br. 3113	4·52 K 5	23 22 6·509	+315·75	− 0·61	− 0·39	−21 3 10·90	+1977·1	+ 3·4	− 5·6	5 6	25·22 25·30
1551	κ Pisc	4·94 A 2	23 23 5·230	+306·96	+ 0·01	+ 0·56	+ 0 50 41·21	+1978·5	+ 3·2	− 9·3	36 51	28·05 28·17
1552	BD − 12°, 6496	6·48 G 0	23 24 11·075	+311·65	− 0·33	+ 0·66	−11 51 43·68	+1980·0	+ 3·1	− 1·9	5	26·34
1553	CD − 26°, 16654	6·89 A 3	23 24 27·710	+317·27	− 0·77	− 0·13	−25 49 58·84	+1980·4	+ 3·1	− 0·5	4 5	28·76
1554	BD + 15°, 4830	6·98 A 2	23 25 15·678	+301·65	+ 0·39	− 0·05	+15 35 57·53	+1981·5	+ 2·9	− 0·1	4	29·05
1555	Br. 3124	7·10 G 0	23 25 39·468	+307·78	− 0·04	− 0·15	− 1 26 54·70	+1982·0	+ 2·9	− 2·8	4	30·75
1556	39H Ceph	5·62 F 0	23 27 43·733	− 38·37	−33·97	+ 9·75	+86 53 37·85	+1984·6	− 0·8	+ 1·9	211 219	29·21 28·55
1557	BD + 27°, 4566	6·68 K 0	23 27 46·571	+297·22	+ 0·75	+ 0·10	+28 15 9·51	+1984·7	+ 2·6	− 1·5	5	28·30
1558	BD + 6°, 5168	6·84 F 5	23 28 23·775	+305·13	+ 0·18	− 0·19	+ 6 40 19·25	+1985·4	+ 2·6	− 4·7	4	29·54
1559	Gr. 4089	7·08 A 0	23 28 47·310	+226·08	+ 3·14	+ 1·26	+77 24 19·25	+1985·9	+ 1·8	+ 1·5	9 9	30·76 30·66
1560	Gr. 4087	7·02 K 0	23 29 1·575	+283·15	+ 1·68	+ 0·04	+53 16 20·50	+1986·2	+ 2·4	+ 0·4	4	29·56
1561	Br. 3132	5·51 M 3	23 29 42·515	+300·13	+ 0·58	+ 0·05	+22 5 5·10	+1987·0	+ 2·5	− 1·8	3 4	27·77 28·55
1562	BD + 11°, 5026	7·7 A 3	23 31 22·955	+303·67	+ 0·33	− 0·09	+12 14 53·87	+1988·9	+ 2·3	− 5·4	4	30·33
1563	Gr. 4099	7·40 K 0	23 31 46·125	+268·45	+ 2·64	+ 0·56	+67 4 37·49	+1989·3	+ 2·0	+ 0·9	8 9	30·71 30·89
1564	Br. 3139	5·65 F 5	23 32 33·576	+306·81	+ 0·06	− 0·73	+ 1 41 9·56	+1990·1	+ 2·2	+ 6·2	5	27·39
1565	Gr. 4105	5·86 B 9	23 33 51·657	+292·59	+ 1·32	+ 0·09	+44 0 51·25	+1991·5	+ 2·0	− 0·9	6 7	26·37 26·27
1566	Pi 23h, 137	6·66 K 0	23 34 9·161	+311·45	− 0·40	+ 0·58	−15 30 29·30	+1991·7	+ 2·1	−10·5	5	25·37
1567	Br. 3146	5·32 B 9	23 35 29·768	+290·25	+ 1·60	− 0·21	+50 3 22·27	+1993·0	+ 1·8	− 0·4	4 6	25·46 25·23
1568	Gr. 4120	6·08 G 5	23 36 4·211	+260·00	+ 3·53	− 0·17	+73 35 13·68	+1993·6	+ 1·6	+ 1·1	11	27·23 27·30
1569	ι Pisc	4·28 F 8	23 36 5·573	+306·01	+ 0·16	+ 2·48	+ 5 13 9·62	+1993·6	+ 1·9	−43·5	26 41	28·66 28·38
1570	γ Ceph	3·42 K 0	23 36 15·109	+246·38	+ 3·99	− 1·97	+77 12 49·50	+1993·7	+ 1·4	+15·4	11 14	28·60 28·29
1571	BD + 35°, 5074	6·30 F 5	23 36 55·451	+297·41	+ 1·05	+ 1·91	+36 18 16·88	+1994·3	+ 1·8	+ 2·6	7 6	27·07 26·95
1572	BD − 8°, 6166	7·08 F 8	23 36 56·505	+309·25	− 0·19	+ 0·43	− 8 19 45·12	+1994·3	+ 1·8	− 4·0	4 5	29·50 28·74
1573	Br. 3165	5·60 K 0	23 44 5·165	+307·80	− 0·03	+ 0·60	− 3 10 42·80	+1999·6	+ 1·1	+ 1·0	16 18	25·16 25·13
1574	δ Sclp	4·64 A 0	23 45 1·320	+312·03	− 0·79	+ 0·77	−28 32 41·96	+2000·2	+ 1·1	−10·3	5 4	27·98 28·02
1575	CD − 28°, 18361	7·03 F 8	23 45 26·397	+311·84	− 0·77	− 0·58	−28 16 12·31	+2000·4	+ 1·0	− 3·3	5	27·37

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

No.	STAR	M + Sp.	R.A. 1925	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1925	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900 +
			h m s	s	s	s	° ′ ″	″	″	″		
1576	Pi 23h, 194.....	7·14 K 0	23 45 33·193	+310·69	− 0·56	− 0·05	−22 1 51·08	+2000·5	+ 1·0	+ 1·0	7 7	28·26 27·68
1577	BD + 63°, 2064...	6·76 A 0	23 47 18·448	+292·40	+ 2·77	+ 0·04	+63 34 4·72	+2001·4	+ 0·8	+ 0·8	8	28·89
1578	Br. 3173.....	6·11 M 0	23 47 31·470	+306·14	+ 0·29	− 0·15	+ 8 53 51·64	+2001·5	+ 0·8	− 5·9	5	26·36
1579	Br. 3174.....	5·85 K 2	23 48 7·370	+306·98	+ 0·12	+ 0·06	+ 2 30 48·30	+2001·8	+ 0·7	− 1·1	7	25·03
1580	φ Pegs.....	5·23 M 0	23 48 40·131	+305·04	+ 0·56	− 0·06	+18 42 13·68	+2002·0	+ 0·7	− 3·5	51 72	28·68 28·21
1581	BD + 21°, 4999...	6·30 M 0	23 52 51·982	+305·58	+ 0·68	− 0·16	+22 13 50·32	+2003·5	+ 0·3	− 0·7	14 16	25·06 25·09
1582	V Ceph.....	6·42 A 0	23 52 54·202	+274·64	+ 9·35	+ 2·57	+82 46 25·29	+2003·5	+ 0·2	+ 1·3	12 13	27·74 27·79
1583	Br. 3188.....	6·40 K 2	23 54 29·723	+308·22	− 0·36	+ 0·54	−16 15 52·91	+2003·9	+ 0·1	− 0·4	7 10	29·47 28·59
1584	BD + 34°, 5039...	6·71 A 3	23 54 31·530	+305·08	+ 1·09	+ 0·16	+34 35 43·77	+2003·9	+ 0·1	+ 1·1	4 3	26·21 26·40
1585	σ Cass.....	4·93 B 2	23 55 11·744	+303·23	+ 2·18	+ 0·09	+55 20 15·50	+2004·0	+ 0·0	− 0·2	5	27·60
1586	ω Pisc.....	4·03 F 5	23 55 27·534	+306·98	+ 0·25	+ 0·99	+ 6 26 52·73	+2004·1	+ 0·0	−11·1	22 34	28·94 29·45
1587	Pi 23h, 249.....	6·77 G 5	23 55 49·790	+307·55	− 0·08	+ 0·24	− 6 18 33·82	+2004·1	− 0·0	− 4·9	5	25·13
1588	Br. 3201.....	5·78 F 0	23 58 39·553	+307·17	+ 0·30	− 0·68	+ 8 4 8·16	+2004·4	− 0·3	− 4·6	10 15	25·09 25·19
1589	2 Ceti.....	4·62 A 0	23 59 53·926	+307·30	− 0·39	+ 0·15	−17 45 12·23	+2004·5	− 0·4	− 0·4	7 7	26·46 26·03

Position 1925 + T = Position 1925 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.).
T in centuries from 1925·0, T′ in centuries from epoch.

CORRECTIONS TO G.C. AND FK3

EXPLANATION

The following pages give the observed corrections to the G.C. and FK3 for the epoch of observation. The number of each star as it appears in the catalogue has been added for convenience of identification.

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
1	BD + 13°, 5201	26	.....	+0·002	−0·33	.....	.....
2	BD + 26°, 4744	48	.....	+0·050	+0·34	.....	.....
3	Gr. 4223	54	.....	−0·029	+0·40	.....	.....
4	BD + 39°, 5219	87	.....	−0·012	+0·71	.....	.....
5	9 G Ceti	98	1003	+0·016	+0·11	+0·013	+0·35
6	Br. 3213	114	.....	+0·029	−0·38	.....	.....
7	α Andr.	127	1	−0·024	+0·13	−0·025	+0·11
8	β Cass.	147	2	−0·001	−0·15	+0·027	−0·18
9	BD + 16°, 3	154	.....	+0·009	+0·26	.....	.....
10	BD + 56°, 11	176	.....	−0·035	+0·09	.....	.....
11	BD − 13°, 13	181	.....	+0·012	+0·73	.....	.....
12	Gr. 7	201	.....	−0·030	+0·20	.....	.....
13	γ Pegs.	238	7	+0·012	+0·08	+0·012	−0·06
14	BD + 3°, 26	304	.....	−0·003	+0·71	.....	.....
15	BD + 22°, 34	331	.....	+0·027	−0·33	.....	.....
16	BD + 11°, 34	352	.....	+0·017	−0·06	.....	.....
17	Pi 0h, 38	373	1006	−0·079	+0·25	−0·080	+0·08
18	Br. 13	376	.....	−0·005	+0·09	.....	.....
19	BD − 8°, 38	378	.....	+0·036	−0·05	.....	.....
20	ι Ceti	388	9	+0·047	+0·00	+0·038	−0·11
21	BD − 18°, 41	403	1007	−0·051	+0·49	−0·075	+0·35
22	Br. 23	488	.....	−0·050	+0·41	.....	.....
23	Pi 0h, 78	545	1011	−0·014	+0·06	−0·005	−0·02
24	Br. 33	548	1012	−0·041	−0·08	−0·051	−0·13
25	BD + 9°, 47	550	.....	+0·002	+0·40	.....	.....
26	BD − 21°, 57	554	.....	−0·011	+0·47	.....	.....
27	BD + 63°, 53	582	.....	+0·038	+0·41	.....	.....
28	Br. 35	583	.....	−0·001	+0·33	.....	.....
29	BD + 38°, 68	644	.....	−0·051	+0·27	.....	.....
30	CD − 26°, 160	646	.....	−0·006	+0·15	.....	.....
31	13 Ceti	696	.....	+0·007	+0·42	.....	.....
32	Br. 54	728	.....	−0·025	+0·10	.....	.....
33	Pi 0h, 131	744	.....	+0·032	+0·20	.....	.....
34	Br. 48	760	.....	+0·017	−0·12	.....	.....
35	Gr. 113	770	.....	−0·023	+0·41	.....	.....
36	Br. 58	778	.....	+0·009	−0·42	.....	.....
37	α Cass.	792	21	+0·001	+0·40	+0·016	+0·33
38	Pi 0h, 144	798	.....	+0·011	+0·37	.....	.....
39	Pi 0h, 146	804	.....	+0·020	+0·65	.....	.....
40	β Ceti	865	22	−0·001	+0·66	−0·012	+0·63
41	BD + 32°, 122	867	.....	−0·004	+0·49	.....	.....
42	BD + 58°, 101	926	.....	−0·039	+0·28	.....	.....
43	Br. 80	941	.....	+0·046	+0·11	.....	.....
44	Pi 0h, 184	945	.....	−0·029	+0·10	.....	.....
45	BD − 22°, 134	957	1018	−0·023	+0·28	−0·029	+0·37
46	δ Pisc.	963	28	−0·005	+0·13	−0·006	+0·06
47	Br. 86	968	1020	−0·015	−0·31	−0·025	−0·35
48	Pi 0h, 198	984	.....	+0·037	+0·31	.....	.....
49	BD − 1°, 104	997	.....	+0·012	−0·06	.....	.....
50	Pi 0h, 196	999	.....	−0·051	+0·11	.....	.....

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
51	20 Ceti	1055	1022	+0·045	+0·54	+0·037	+0·58
52	BD + 36°, 148	1060	.....	−0·004	+0·01	.....	.....
53	γ Cass	1117	32	−0·064	−0·11	−0·024	−0·14
54	BD + 13°, 127	1112	.....	−0·002	−0·11	.....	.....
55	CD − 28°, 288	1110	.....	−0·020	+0·40	.....	.....
56	μ Andr	1122	33	−0·014	+0·54	−0·009	+0·57
57	BD + 0°, 149	1146	.....	+0·014	+0·46	.....	.....
58	BD + 20°, 131	1160	.....	−0·047	+0·31	.....	.....
59	BD − 6°, 176	1174	1024	+0·028	+0·23	+0·018	+0·16
60	α Sclp	1172	35	−0·005	+0·47	−0·012	+0·31
61	BD + 68°, 64	1212	.....	−0·071	−0·16	.....	.....
62	BD − 17°, 180	1236	1025	+0·003	−0·16	−0·010	−0·20
63	43 H Ceph	1288	Na	−0·046	+0·04	−0·050	+0·12
64	ε Pisc	1258	36	+0·007	+0·23	+0·007	+0·28
65	BD + 51°, 220	1275	.....	+0·029	+0·47	.....	.....
66	BD + 28°, 174	1290	.....	+0·000	+0·66	.....	.....
67	106 G Ceti	1029	1029	.....	.....	−0·007	+0·44
68	Br. 131	1368	.....	−0·036	−0·04	.....	.....
69	Br. 132	1370	.....	−0·006	+0·32	.....	.....
70	Br. 135	1369	.....	+0·013	+0·88	.....	.....
71	BD + 9°, 132	1381	.....	+0·027	+0·33	.....	.....
72	η Ceti	1384	40	+0·009	+0·37	−0·002	+0·27
73	β Andr	1400	42	−0·022	+0·85	−0·021	+0·85
74	Br. 139	1434	.....	−0·093	−0·20	.....	.....
75	BD + 45°, 291	1428	.....	−0·025	−0·13	.....	.....
76	Br. 156	1463	.....	−0·019	+0·23	.....	.....
77	Br. 165	1501	.....	+0·012	+0·34	.....	.....
78	BD + 38°, 229	1541	.....	−0·033	+0·46	.....	.....
79	Gr. 282	1550	.....	+0·007	+0·12	.....	.....
80	89 Pisc	1566	1034	+0·023	+0·31	+0·017	+0·31
81	BD + 57°, 257	1590	.....	−0·024	+1·41	.....	.....
82	φ Cass	1594	.....	−0·001	+0·16	.....	.....
83	BD − 16°, 223	1605	.....	−0·037	+0·56	.....	.....
84	BD + 21°, 178	1633	.....	+0·022	−0·01	.....	.....
85	BD + 10°, 168	1634	.....	+0·032	+0·09	.....	.....
86	θ Ceti	1695	47	+0·013	+0·29	+0·005	+0·27
87	δ Cass	1715	48	+0·013	+0·31	+0·030	+0·33
88	BD − 3°, 195	1704	1037	+0·010	−0·38	+0·010	−0·36
89	BD + 26°, 239	1739	.....	−0·023	+0·01	.....	.....
90	94 Pisc	1740	1039	−0·002	+0·27	−0·008	+0·20
91	Br. 192	1747	1041	+0·004	+0·19	−0·007	+0·21
92	Br. 201	1810	.....	−0·004	+0·56	.....	.....
93	η Pisc	1839	50	+0·000	+0·18	+0·003	+0·08
94	BD + 34°, 265	1850	.....	+0·015	+0·48	.....	.....
95	BD + 54°, 315	1873	.....	+0·065	−0·28	.....	.....
96	BD − 7°, 256	1888	.....	+0·028	+0·45	.....	.....
97	Br. 211	1929	.....	−0·007	+0·06	.....	.....
98	Br. 207	1938	.....	−0·011	+0·68	.....	.....
99	Br. 213	1941	.....	−0·004	+0·45	.....	.....
100	Br. 205	1987	.....	+0·012	+0·15	.....	.....

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
101	α U. Min.	2243	Nb	−0·241	−0·02	−0·414	+0·06
102	BD + 20°, 264	1980	.....	−0·040	+0·00	.....	.....
103	π Andr.	2025	.....	−0·039	+0·12	.....	.....
104	ν Pisc.	2055	56	+0·022	+0·49	+0·027	+0·50
105	Gr. 371	2095	.....	−0·030	+0·54	.....	.....
106	BD − 4°, 260	2093	1049	+0·030	−0·55	+0·031	−0·52
107	τ Ceti	2123	59	+0·021	+0·87	+0·018	+0·88
108	o Pisc.	2139	60	+0·012	+0·17	+0·013	+0·04
109	Pi 1h, 159	2161	.....	+0·037	+0·63	.....	.....
110	CD − 27°, 595	2152	.....	+0·046	+0·50	.....	.....
111	BD − 14°, 335	2172	.....	+0·005	+0·27	.....	.....
112	BD − 21°, 300	2184	.....	+0·002	+0·34	.....	.....
113	Br. 235	2188	1050	+0·008	+0·70	+0·011	+0·69
114	Gr. 379	2215	.....	+0·024	+0·49	.....	.....
115	BD + 25°, 305	2207	.....	+0·006	−0·13	.....	.....
116	BD + 80°, 58	2270	.....	+0·020	+0·37	.....	.....
117	ζ Ceti	2249	62	+0·010	+0·39	+0·014	+0·32
118	ε Cass.	2289	63	−0·067	+0·76	−0·016	+0·74
119	ξ Pisc.	2293	65	+0·007	+0·63	+0·010	+0·60
120	ω Cass.	2313	.....	−0·013	+0·34	.....	.....
121	BD + 8°, 292	2308	.....	+0·015	+0·73	.....	.....
122	β Arie.	2309	66	+0·006	+0·20	+0·014	+0·13
123	BD + 30°, 310	2368	.....	−0·002	−0·06	.....	.....
124	Pi 1h, 223	2395	.....	+0·000	−0·21	.....	.....
125	BD 59°, 376	2407	.....	−0·013	+0·94	.....	.....
126	Br. 271	2416	.....	+0·038	+0·16	.....	.....
127	υ Ceti	2419	71	+0·025	+0·25	+0·018	+0·15
128	BD − 9°, 380	2426	.....	−0·022	−0·53	.....	.....
129	Br. 269	2442	1054	−0·003	−0·19	+0·012	−0·24
130	γ Andr.	2477	73	−0·009	+0·56	−0·009	+0·41
131	Br. 280	2474	.....	+0·011	−0·03	.....	.....
132	CD − 24°, 872	2470	.....	−0·002	+0·64	.....	.....
133	BD − 18°, 356	2496	.....	−0·040	+0·03	.....	.....
134	α Arie.	2538	74	−0·009	−0·02	+0·005	−0·05
135	Br. 288	2552	.....	−0·009	+0·26	.....	.....
136	CD − 28°, 675	2561	.....	−0·028	+0·29	.....	.....
137	β Tria.	2572	75	−0·014	−0·35	+0·004	−0·38
138	Br. 256	2622	Nα	+0·103	+0·19	+0·027	+0·49
139	BD − 13°, 400	2608	.....	−0·017	+0·92	.....	.....
140	Br. 302	2619	.....	−0·004	+0·47	.....	.....
141	Br. 301	2633	.....	−0·002	+0·22	.....	.....
142	Br. 300	2645	.....	−0·004	−0·12	.....	.....
143	ξ^1 Ceti	2656	1058	+0·017	+0·16	+0·023	+0·14
144	Br. 315	2706	1059	+0·001	−0·27	−0·002	−0·32
145	δ Tria.	2733	.....	−0·006	−0·02	.....	.....
146	θ Arie.	2767	81	−0·007	+0·04	−0·005	+0·06
147	BD + 12°, 315	2768	.....	−0·036	+0·86	.....	.....
148	Pi 2h, 52	2770	1061	−0·008	+0·23	+0·002	+0·09
149	Br. 319	2779	1063	+0·003	−0·08	+0·016	−0·17
150	Br. 335	2850	.....	+0·046	−0·07	.....	.....

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				s	″	s	″
151	BD − 18°, 409	2853	1064	+0·004	+0·63	+0·006	+0·68
152	CD − 26°, 857	2900	.....	−0·010	+0·40	.....	.....
153	BD − 20°, 455	2941	.....	+0·005	−0·15	.....	.....
154	Br. 342	2956	1068	−0·001	+0·15	+0·008	+0·21
155	ξ² Ceti	2960	85	+0·002	+0·13	+0·009	+0·02
156	BD + 8°, 385	2983	.....	+0·012	+0·16	.....	.....
157	Br. 349	3003	.....	+0·025	+0·06	.....	.....
158	Br. 350	3032	1070	−0·016	+0·16	−0·015	+0·16
159	BD + 10°, 340	3085	.....	+0·012	+0·69	.....	.....
160	Pi 2h, 115	3122	.....	+0·019	+0·26	.....	.....
161	Br. 365	3126	1074	+0·003	+0·36	+0·007	+0·44
162	BD + 61°, 445	3156	.....	−0·002	+0·66	.....	.....
163	BD + 61°, 448	3169	.....	−0·023	−0·18	.....	.....
164	δ Ceti	3192	91	+0·005	+0·33	+0·012	+0·26
165	BD + 58°, 504	3219	.....	−0·004	+0·48	.....	.....
166	BD − 16°, 484	3211	.....	−0·009	+0·85	.....	.....
167	Br. 344	3270	.....	−0·023	−0·08	.....	.....
168	BD + 47°, 683	3258	.....	+0·005	+0·24	.....	.....
169	θ Pers	3277	93	+0·033	+0·45	+0·036	+0·38
170	Br. 376	3278	1077	−0·037	+0·17	−0·032	+0·22
171	BD − 3°, 426	3283	.....	+0·026	+0·37	.....	.....
172	μ Ceti	3309	98	−0·003	+0·15	+0·005	+0·19
173	CD − 26°, 996	3305	1078	−0·032	−0·51	−0·018	−0·69
174	Br. 373	3345	.....	−0·066	+0·05	.....	.....
175	BD + 35°, 553	3335	.....	−0·006	+0·38	.....	.....
176	BD − 22°, 479	3348	.....	+0·010	+0·25	.....	.....
177	Br. 393	3369	.....	−0·039	+0·13	.....	.....
178	BD − 13°, 530	3366	.....	−0·066	+0·56	.....	.....
179	Gr. 569	3527	.....	−0·099	−0·01	.....	.....
180	BD − 5°, 541	3493	.....	+0·044	+0·06	.....	.....
181	BD + 14°, 492	3515	.....	−0·007	+0·30	.....	.....
182	Br. 410	3531	.....	−0·007	+0·45	.....	.....
183	η Erid	3539	104	−0·011	+0·06	−0·003	+0·10
184	BD + 3°, 410	3547	.....	−0·002	−0·30	.....	.....
185	Br. 412	3562	1081	−0·023	+0·62	−0·018	+0·58
186	π Pers	3567	.....	−0·050	+0·12	.....	.....
187	CD − 29°, 1106	3591	.....	−0·005	+0·46	.....	.....
188	α Ceti	3643	107	+0·023	−0·07	+0·025	−0·05
189	BD − 18°, 516	3645	1084	+0·031	−0·18	+0·034	−0·19
190	γ Pers	3664	108	−0·038	+0·24	−0·016	+0·22
191	β Pers	3733	111	−0·011	+0·49	+0·003	+0·38
192	BD − 2°, 554	3730	.....	+0·026	+0·34	.....	.....
193	BD − 14°, 604	3734	1087	−0·088	+0·51	−0·072	+0·38
194	Br. 440	3742	.....	−0·026	+0·46	.....	.....
195	Br. 441	3762	1088	−0·026	−0·08	−0·014	−0·22
196	BD + 52°, 663	3781	.....	+0·029	+0·65	.....	.....
197	BD + 31°, 553	3788	.....	−0·009	−0·32	.....	.....
198	Gr. 621	3810	.....	−0·052	+0·16	.....	.....
200	BD + 47°, 779	3812	.....	+0·024	+0·32	.....	.....
201	δ Arie	3805	114	−0·034	+0·20	−0·024	+0·15

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				s	″	s	″
202	Pi 3h, 6	3827	.....	−0·017	−0·23	.....	.....
203	α Forn	3831	117	−0·018	+0·54	−0·015	+0·39
204	Gr. 627	3870	.....	−0·014	−0·28	.....	.....
205	BD + 38°, 690	3927	.....	−0·048	+0·11	.....	.....
206	BD + 12°, 460	3941	.....	+0·048	+0·20	.....	.....
207	Br. 402	4030	Nβ	+0·126	−0·20	−0·025	−0·18
208	BD − 19°, 651	3959	.....	−0·028	−0·01	.....	.....
209	Pi 3h, 27	4034	1096	−0·065	+0·14	−0·017	+0·18
210	α Pers	4041	120	0·000	+0·28	+0·002	+0·30
211	CD − 26°, 1257	4031	.....	−0·008	−0·05	.....	.....
212	o Taur	4070	121	−0·006	+0·08	+0·006	−0·08
213	BD − 4°, 586	4077	.....	−0·006	+0·38	.....	.....
214	BD + 19°, 537	4117	.....	−0·002	+0·33	.....	.....
215	BD + 29°, 566	4131	.....	+0·013	+0·04	.....	.....
216	BD − 11°, 667	4130	.....	+0·015	+0·28	.....	.....
217	CD − 23°, 1412	4167	.....	−0·020	+0·56	.....	.....
218	5 Taur	4184	125	−0·024	+0·29	−0·020	+0·20
219	BD + 34°, 674	4222	1098	−0·039	+0·41	−0·023	+0·28
220	Br. 489	4231	.....	−0·058	−0·35	.....	.....
221	ε Erid	4244	127	0·000	+0·39	+0·014	+0·41
222	τ^5 Erid	4258	1099	−0·018	+0·28	+0·001	+0·37
223	Br. 494	4307	.....	−0·034	+0·07	.....	.....
224	Br. 498	4305	1100	+0·005	−0·14	+0·014	−0·20
225	Br. 496	4311	.....	+0·002	+0·27	.....	.....
226	BD + 13°, 579	4346	.....	−0·005	+0·19	.....	.....
227	Br. 502	4347	.....	+0·003	+0·41	.....	.....
228	BD + 40°, 813	4375	.....	−0·003	+0·30	.....	.....
229	δ Pers	4427	131	+0·008	+0·25	+0·021	+0·21
230	Pi 3h, 102	4463	.....	−0·120	−0·22	.....	.....
231	BD + 45°, 804	4459	.....	+0·007	+0·53	.....	.....
232	δ Erid	4450	135	−0·033	+0·82	−0·021	+0·75
233	BD + 36°, 742	4464	.....	−0·025	−0·12	.....	.....
234	Pi 3h, 138	4460	.....	+0·035	−0·22	.....	.....
235	BD + 54°, 707	4480	.....	−0·070	−0·05	.....	.....
236	BD + 27°, 556	4468	.....	−0·076	−0·16	.....	.....
237	CD − 26°, 1423	4514	.....	−0·005	+0·73	.....	.....
238	Gr. 642	4693	.....	−0·059	−0·12	.....	.....
239	η Taur	4541	139	−0·010	+0·29	+0·005	+0·32
240	τ^6 Erid	4547	140	+0·014	−0·33	+0·028	−0·31
241	BD − 0°, 602	4584	.....	−0·024	+0·42	.....	.....
242	BD − 21°, 703	4593	.....	−0·014	−0·23	.....	.....
243	BD + 57°, 752	4668	1105	+0·027	−0·07	+0·047	−0·03
244	Br. 535	4662	.....	+0·003	+0·10	.....	.....
245	Pi 3h, 187	4677	1106	+0·004	−0·41	+0·020	−0·39
246	ζ Pers	4688	144	−0·063	+0·50	−0·045	+0·50
247	BD − 7°, 695	4683	1107	−0·006	−0·07	+0·017	−0·08
248	BD − 18°, 691	4687	.....	−0·016	+0·24	.....	.....
249	BD + 30°, 591	4720	.....	−0·037	−0·06	.....	.....
250	BD + 2°, 628	4745	.....	+0·043	−0·28	.....	.....
251	ε Pers	4759	147	−0·019	+0·59	0·000	+0·64

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				s	″	s	″
252	BD + 24°, 599	4757	.....	+0·004	+0·59	.....	.....
253	γ Erid	4778	149	−0·033	+0·26	−0·017	+0·25
254	BD + 13°, 621	4786	.....	−0·013	+0·29	.....	.....
255	λ Taur	4805	150	−0·006	+0·14	+0·007	+0·26
256	BD + 73°, 210	4882	.....	+0·040	−0·27	.....	.....
257	ν Taur	4862	151	−0·023	−0·01	−0·001	−0·02
258	BD + 61°, 669	4898	.....	−0·145	+0·58	.....	.....
259	BD − 13°, 806	4907	.....	+0·028	−0·17	.....	.....
261	BD + 42°, 897	4958	.....	−0·084	−0·12	.....	.....
262	Br. 561	4973	.....	−0·051	+0·51	.....	.....
263	BD − 22°, 754	4961	.....	−0·030	+0·21	.....	.....
264	Pi 3h, 362	5013	.....	−0·001	−0·27	.....	.....
265	Br. 566	5042	.....	+0·002	+0·37	.....	.....
266	BD + 48°, 1059	5067	.....	+0·049	+0·30	.....	.....
267	o^1 Erid	5056	154	−0·013	−0·13	+0·001	−0·11
268	BD − 17°, 816	5062	.....	−0·026	−0·42	.....	.....
269	Gr. 766	5208	.....	+0·183	−0·06	.....	.....
270	Pi 4h, 7	5132	.....	−0·050	0·00	.....	.....
271	Gr. 750	5301	Nc	+0·043	−0·07	−0·019	−0·02
272	Br. 576	5189	.....	−0·017	−0·19	.....	.....
273	γ Taur	5226	159	−0·033	+0·36	−0·020	+0·32
274	Br. 586	5252	.....	−0·033	+0·58	.....	.....
275	BD − 16°, 838	5255	1119	+0·032	+0·50	+0·025	+0·47
276	BD − 7°, 798	5267	.....	−0·037	−0·55	.....	.....
277	Pi 4h, 68	5290	.....	−0·018	+0·87	.....	.....
278	δ Taur	5304	162	−0·039	−0·17	−0·023	−0·24
279	ξ Erid	5327	1120	+0·008	+0·94	+0·019	+0·86
280	BD + 57°, 800	5358	.....	−0·054	+0·21	.....	.....
281	BD + 69°, 258	5401	1122	−0·022	−0·13	+0·015	+0·03
282	BD + 8°, 687	5378	.....	−0·039	+1·15	.....	.....
283	BD + 1°, 753	5399	.....	+0·040	−0·04	.....	.....
284	ε Taur	5430	164	−0·034	+0·44	−0·011	+0·37
285	BD − 21°, 878	5435	.....	+0·005	+1·06	.....	.....
286	BD + 27°, 661	5447	.....	−0·014	−0·11	.....	.....
287	BD − 13°, 893	5458	.....	−0·016	+0·87	.....	.....
288	Br. 620	5482	.....	−0·027	−0·14	.....	.....
289	BD + 36°, 907	5515	.....	−0·007	+0·48	.....	.....
290	α Taur	5605	168	−0·041	+0·06	−0·019	+0·05
291	Br. 640	5627	.....	−0·047	+0·04	.....	.....
292	Br. 642	5635	.....	+0·016	+0·22	.....	.....
293	BD + 20°, 785	5644	.....	−0·053	−0·07	.....	.....
295	BD + 76°, 174	5711	.....	+0·080	−0·34	.....	.....
296	Br. 646	5684	.....	−0·038	+0·08	.....	.....
297	Br. 644	5719	.....	−0·047	−0·15	.....	.....
298	Gr. 866	5726	1128	−0·010	+0·18	+0·016	+0·11
299	τ Taur	5716	174	−0·019	0·00	+0·005	+0·01
300	Pi 4h, 161	5749	.....	−0·032	+0·35	.....	.....
301	Br. 656	5768	1131	−0·001	−0·05	+0·019	−0·05
302	CD − 27°, 1869	5783	.....	−0·079	+0·27	.....	.....
303	μ Erid	5796	176	−0·007	+0·38	+0·011	+0·37

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				s	"	s	"
304	Pi 4h, 186	5794	.....	−0·032	+0·17	.....	.....
305	Br. 651	5817	.....	−0·030	−0·09	.....	.....
306	BD + 29°, 741	5841	.....	−0·044	−0·20	.....	.....
307	Gr. 856	5962	.....	+0·028	−0·33	.....	.....
308	BD − 14°, 970	5882	.....	−0·068	−0·03	.....	.....
309	BD + 61°, 739	5927	.....	−0·092	+0·53	.....	.....
310	π^5 Orio	5978	180	−0·025	+0·14	0·000	+0·08
311	Pi 4h, 236	5986	.....	−0·043	+0·10	.....	.....
312	BD − 16°, 992	6012	.....	−0·019	+0·50	.....	.....
313	ι Auri	6029	181	−0·062	+0·34	−0·033	+0·32
314	Br. 689	6032	.....	−0·036	−0·46	.....	.....
315	Br. 684	6044	.....	−0·018	+0·22	.....	.....
316	Br. 683	6064	.....	+0·008	+0·28	.....	.....
317	Br. 695	6068	.....	−0·002	+0·22	.....	.....
318	BD + 14°, 796	6072	.....	−0·045	+0·08	.....	.....
319	ε Auri	6123	183	−0·002	+0·11	+0·019	+0·06
320	Gr. 915	6153	.....	−0·040	−0·31	.....	.....
321	ι Taur	6158	184	−0·058	+0·04	−0·032	+0·01
322	Br. 691	6193	.....	−0·069	−0·27	.....	.....
323	CD − 24°, 2795	6195	.....	−0·033	+0·39	.....	.....
324	BD − 3°, 998	6206	.....	−0·021	+0·46	.....	.....
325	BD + 33°, 953	6222	.....	−0·030	+0·01	.....	.....
326	ε Leps	6231	186	−0·035	+0·22	−0·021	+0·05
327	Pi 4h, 254	6288	.....	−0·132	+0·34	.....	.....
328	BD − 12°, 1076	6268	.....	+0·007	−0·11	.....	.....
329	β Erid	6274	188	−0·018	+0·00	+0·007	−0·06
330	Br. 710	6279	.....	−0·041	+0·31	.....	.....
331	DB + 85°, 74	6447	Nγ	−0·001	−0·04	−0·107	+0·06
332	DB + 27°, 732	6301	1141	−0·042	+0·32	−0·023	+0·17
333	Pi 4h, 294	6311	.....	−0·009	+0·05	.....	.....
334	Br. 716	6300	1142	−0·065	+0·81	−0·036	+0·76
335	BD 67°, 371	6356	.....	−0·041	−0·01	.....	.....
337	Br. 729	6392	.....	−0·063	−0·39	.....	.....
338	β Orio	6410	194	−0·027	+0·21	−0·006	+0·23
339	α Auri	6427	193	−0·034	+0·17	−0·015	+0·10
340	τ Orio	6480	195	−0·028	+0·11	−0·002	+0·21
341	Br. 741	6506	.....	−0·046	−0·28	.....	.....
342	BD + 54°, 882	6527	.....	+0·016	+0·68	.....	.....
343	Br. 744	6509	.....	−0·051	−0·23	.....	.....
344	BD − 18°, 1051	6511	.....	−0·050	+0·35	.....	.....
345	BD + 10°, 758	6537	.....	−0·013	+0·56	.....	.....
346	BD + 8°, 933	6574	.....	−0·017	+0·31	.....	.....
347	BD + 85°, 78	6778	.....	+0·110	+0·02	.....	.....
348	BD + 70°, 351	6633	.....	−0·027	−0·11	.....	.....
349	σ Auri	6636	.....	−0·056	−0·30	.....	.....
350	CD − 26°, 2185	6634	.....	+0·005	+1·50	.....	.....
351	γ Orio	6668	201	−0·020	+0·14	+0·005	+0·19
352	β Taur	6681	202	−0·041	+0·52	−0·010	+0·55
353	Br. 767	6714	1148	−0·032	+0·14	−0·004	+0·06
354	Pi 5h, 102	6726	.....	−0·010	−0·14	.....	.....

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				s	″	s	″
355	BD − 21°, 1174	6747	.....	+0·001	+0·60	.....	.....
356	BD − 0°, 960	6756	.....	−0·014	+0·27	.....	.....
357	BD + 29°, 909	6772	.....	−0·019	+0·80	.....	.....
358	BD + 41°, 1206	6797	.....	−0·004	+0·20	.....	.....
359	δ Orio	6847	206	−0·032	+0·29	−0·008	+0·16
360	α Leps	6875	207	−0·052	−0·18	−0·034	−0·14
361	Br. 770	6917	.....	−0·125	−0·32	.....	.....
362	Br. 793	6896	.....	−0·008	+0·01	.....	.....
363	ε Orio	6960	210	−0·018	−0·13	+0·008	−0·12
364	BD + 10°, 828	6975	.....	−0·029	−0·20	.....	.....
365	BD − 6°, 1255	6971	.....	+0·013	+0·99	.....	.....
366	ζ Taur	6985	211	−0·034	−0·06	−0·006	−0·02
367	CD − 27°, 2395	7025	1153	−0·082	+0·11	−0·073	+0·43
368	BD + 24°, 909	7050	.....	−0·043	−0·48	.....	.....
369	BD − 17°, 1199	7058	.....	−0·076	+0·64	.....	.....
370	Br. 797	7105	.....	−0·030	+0·48	.....	.....
371	Gr. 944	7273	Nδ	−0·076	−0·35	−0·011	−0·31
372	BD − 20°, 1171	7193	.....	−0·014	+0·54	.....	.....
373	Br. 830	7224	.....	−0·051	−0·04	.....	.....
374	BD + 29°, 997	7232	.....	−0·045	+0·19	.....	.....
375	BD + 9°, 954	7228	.....	−0·044	+0·30	.....	.....
376	Br. 827	7265	.....	−0·037	+0·36	.....	.....
377	κ Orio	7264	220	−0·026	+0·48	−0·007	+0·50
378	BD − 4°, 1244	7286	1155	−0·043	−0·47	+0·001	−0·65
379	BD − 14°, 1251	7315	.....	−0·025	+0·40	.....	.....
380	α Orio	7451	224	−0·029	+0·44	−0·011	+0·30
381	BD + 11°, 975	7488	.....	−0·013	−0·26	.....	.....
382	β Auri	7543	227	−0·069	+0·40	−0·046	+0·48
383	BD − 18°, 1247	7519	.....	−0·047	+0·17	.....	.....
384	Gr. 1030	7606	.....	−0·069	+0·06	.....	.....
385	Br. 870	7556	1161	−0·024	+0·80	+0·001	+0·62
386	BD + 33°, 1209	7568	1162	−0·074	+0·90	−0·028	+0·65
387	Br. 874	7565	.....	−0·077	+1·17	.....	.....
388	Br. 871	7610	.....	−0·042	+0·21	.....	.....
389	Br. 868	7641	.....	−0·055	−0·48	.....	.....
390	CD − 25°, 2865	7623	.....	−0·104	+1·62	.....	.....
391	μ Orio	7635	.....	−0·019	−0·03	.....	.....
392	Br. 864	7663	.....	0·000	+0·08	.....	.....
393	Pi 5h, 325	7753	.....	−0·072	−0·08	.....	.....
394	θ Leps	7742	.....	−0·038	+0·94	.....	.....
395	BD − 3°, 1297	7762	.....	−0·006	+0·82	.....	.....
396	ν Orio	7772	232	−0·040	+0·49	−0·015	+0·38
397	BD − 21°, 1353	7779	.....	−0·026	+0·58	.....	.....
398	36 Caml	7856	233	−0·089	−0·08	−0·054	−0·25
399	Br. 886	7853	.....	−0·035	+0·43	.....	.....
400	Br. 900	7887	.....	−0·021	+0·11	.....	.....
401	η Gemi	7969	236	−0·047	+0·04	−0·023	+0·02
402	Br. 904	7983	1167	−0·050	+0·17	−0·027	+0·05
403	Br. 893	8016	.....	−0·007	+0·32	.....	.....
404	5 Mono	7986	.....	−0·041	+0·55	.....	.....

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405	BD + 1°, 1275	8017	.....	−0·012	−0·11	.....	.....
406	Br. 917	8039	.....	−0·018	−0·05	.....	.....
407	2 Lyne	8068	237	−0·040	−0·31	+0·007	−0·34
408	BD + 14°, 1235	8073	.....	−0·024	+0·33	.....	.....
409	BD − 16°, 1426	8080	.....	−0·015	+0·74	.....	.....
410	7 Mono	8132	1170	−0·009	−0·09	+0·007	−0·04
411	BD + 30°, 1211	8183	.....	−0·039	+0·56	.....	.....
412	ζ C Maj	8170	240	−0·009	+0·28	+0·017	+0·15
413	CD − 29°, 3021	8184	.....	−0·036	+0·38	.....	.....
414	μ Gemi	8208	241	−0·022	+0·03	+0·001	+0·07
415	Gr. 1004	8505	.....	−0·234	−0·32	.....	.....
416	β C Maj	8223	243	−0·029	+0·77	−0·003	+0·83
417	BD + 70°, 401	8293	.....	−0·073	−0·21	.....	.....
418	ε Mono	8240	244	−0·020	+0·57	−0·001	+0·50
419	BD + 8°, 1316	8248	.....	−0·006	+0·86	.....	.....
420	BD − 11°, 1478	8265	1171	−0·040	+0·06	−0·026	+0·02
421	Gr. 1156	8300	1172	−0·007	+0·35	−0·003	+0·36
422	BD − 1°, 1242	8335	.....	−0·025	+0·49	.....	.....
423	BD + 16°, 1159	8382	.....	+0·004	−0·02	.....	.....
424	10 Mono	8378	246	−0·030	−0·03	−0·006	+0·01
425	Pi 6h, 114	8426	.....	−0·070	+0·38	.....	.....
426	BD − 22°, 1429	8427	.....	−0·012	+0·83	.....	.....
427	BD + 47°, 1310	8472	.....	−0·066	−0·15	.....	.....
428	Gr. 1173	8501	.....	−0·070	−0·22	.....	.....
429	BD + 82°, 177	8605	.....	+0·100	+0·30	.....	.....
430	Pi 6h, 171	8609	.....	−0·027	+0·09	.....	.....
431	Br. 975	8614	.....	+0·011	+0·27	.....	.....
432	γ Gemi	8633	251	−0·042	+0·05	−0·018	+0·01
433	BD + 2°, 1315	8642	.....	−0·047	+0·09	.....	.....
434	BD + 22°, 1416	8672	.....	−0·040	+0·02	.....	.....
435	BD + 11°, 1273	8731	.....	−0·031	+0·04	.....	.....
436	BD + 32°, 1378	8754	.....	−0·075	−0·28	.....	.....
437	ε Gemi	8786	254	−0·064	+0·03	−0·031	+0·01
438	Br. 976	8826	.....	−0·054	+0·02	.....	.....
439	CD − 25°, 3546	8808	.....	−0·081	+1·92	.....	.....
440	ξ Gemi	8823	256	−0·043	+0·11	−0·016	+0·20
441	Br. 984	8858	1176	−0·033	0·00	−0·002	−0·07
442	Br. 991	8856	1177	−0·058	+0·67	−0·034	+0·61
443	Br. 1001	8884	.....	−0·055	+0·10	.....	.....
444	BD − 2°, 1776	8923	1179	−0·017	+0·48	+0·002	+0·42
445	Br. 997	8927	.....	−0·046	−0·11	.....	.....
446	BD − 14°, 1599	8922	.....	−0·036	+0·34	.....	.....
447	BD + 25°, 1469	8974	.....	−0·045	−0·47	.....	.....
448	Gr. 1237	9042	.....	−0·076	+0·25	.....	.....
449	θ C Maj	9051	266	−0·046	+0·47	−0·024	+0·46
450	BD + 10°, 1335	9100	.....	−0·014	−0·18	.....	.....
451	2 C Maj	9107	.....	−0·019	0·00	.....	.....
452	Br. 1010	9151	.....	−0·069	+0·55	.....	.....
453	BD + 3°, 1488	9175	.....	−0·010	+0·68	.....	.....
454	ε C Maj	9188	268	−0·050	+0·20	−0·025	+0·14

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				s	″	s	″
455	BD − 8°, 1662	9226	1181	+0·017	+0·53	+0·032	+0·47
456	ω Gemi	9263	1182	−0·047	−0·18	−0·016	−0·13
457	CD − 25°, 3911	9253	.....	−0·009	+0·73	.....	.....
458	Gr. 1256	9322	.....	−0·049	+0·13	.....	.....
459	ζ Gemi	9313	269	−0·044	+0·08	−0·011	+0·02
460	γ C Maj	9320	271	−0·079	+0·41	−0·059	+0·43
461	BD − 21°, 1732	9351	.....	−0·041	+0·32	.....	.....
462	BD − 11°, 1790	9389	.....	−0·008	+0·61	.....	.....
463	BD + 34°, 1533	9405	.....	−0·068	0·00	.....	.....
464	BD + 7°, 1607	9409	1185	−0·035	+0·48	−0·006	+0·40
465	Br. 1030	9421	.....	−0·062	−0·03	.....	.....
466	Gr. 1262	9489	.....	−0·027	−0·42	.....	.....
467	δ C. Maj	9443	273	−0·036	+0·38	−0·011	+037·
468	51 H Ceph	9772	Nd	−0·015	−0·28	−0·203	−0·25
469	Br. 1034	9493	.....	−0·057	+0·09	.....	.....
470	Gr. 1272	9526	.....	−0·059	+0·25	.....	.....
471	Br. 1045	9505	.....	+0·004	−0·20	.....	.....
472	BD 47°, 1411	9525	.....	+0·045	+0·30	.....	.....
473	δ Mono	9518	1187	−0·035	−0·60	−0·010	−0·60
474	BD + 12°, 1469	9592	.....	−0·045	+0·41	.....	.....
475	λ Gemi	9701	277	−0·057	+0·01	−0·022	−0·16
476	Pi 7h, 56	9698	.....	−0·030	−0·10	.....	.....
477	25 H Caml	9851	.....	−0·056	−0·46	.....	.....
478	Pi 7h, 63	9739	.....	−0·033	+0·11	.....	.....
479	R C Maj	9758	.....	−0·057	−0·12	.....	.....
480	Br. 1063	9796	.....	−0·071	+0·11	.....	.....
481	Br. 1065	9808	.....	−0·016	+0·37	.....	.....
482	CD − 26°, 4223	9805	.....	−0·068	+0·10	.....	.....
483	ι Gemi	9897	282	−0·084	−0·15	−0·048	−0·15
484	η C Maj	9886	283	−0·024	+0·15	+0·009	+0·05
485	BD + 78°, 254	9972	.....	+0·006	−0·24	.....	.....
486	BD − 13°, 2001	9905	1192	−0·015	+0·79	−0·024	+0·83
487	β C Min	9947	285	−0·044	+0·03	−0·014	−0·03
488	BD − 22°, 1874	9960	.....	−0·021	+0·59	.....	.....
489	γ C Min	9974	.....	−0·016	−0·30	.....	.....
490	Br. 1082	10015	.....	−0·022	+0·29	.....	.....
491	6 C Min	10024	1193	−0·027	+0·22	−0·003	+0·11
492	BD − 4°, 1979	10053	.....	−0·037	−0·04	.....	.....
493	BD + 17°, 1596	10073	.....	−0·040	+0·45	.....	.....
494	BD + 46°, 1286	10168	1195	−0·081	+0·32	−0·043	+0·24
495	BD − 7°, 2065	10192	.....	−0·015	+0·27	.....	.....
496	Gr. 1336	10234	.....	−0·032	−0·34	.....	.....
497	BD − 19°, 1967	10208	1197	−0·049	+0·36	−0·006	+0·41
498	BD + 33°, 1560	10230	.....	−0·032	+0·65	.....	.....
499	25 Mono	10217	289	−0·032	+0·11	−0·004	+0·15
500	BD + 14°, 1713	10225	.....	+0·010	−0·06	.....	.....
501	Br. 1093	10279	.....	−0·066	+0·15	.....	.....
502	α C Min	10277	291	−0·026	+0·80	−0·006	+0·66
503	BD + 23°, 1780	10318	.....	−0·012	−0·38	.....	.....
504	Pi 7h, 189	10381	.....	−0·002	+0·02	.....	.....

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505	Br. 1098	10420	.....	−0·086	−0·01	.....	.....
506	Br. 1100	10422	.....	−0·064	+0·16	.....	.....
507	BD + 39°, 1998	10412	.....	−0·078	+0·58	.....	.....
508	Br. 1118	10409	.....	−0·068	−0·46	.....	.....
510	β Gemi	10438	295	−0·069	−0·26	−0·032	−0·25
511	Br. 1115	10456	1200	−0·028	−0·37	+0·002	−0·41
512	BD − 22°, 2027	10501	.....	−0·022	+0·20	.....	.....
513	BD + 5°, 1790	10509	.....	−0·011	+0·01	.....	.....
514	BD + 26°, 1656	10546	.....	−0·034	−0·04	.....	.....
515	ξ Pupp	10562	1204	−0·013	+0·97	+0·008	+0·94
516	BD − 10°, 2253	10606	.....	−0·009	+1·00	.....	.....
517	9 Pupp	10629	298	−0·048	+0·31	−0·016	+0·41
518	BD − 2°, 2322	10635	.....	−0·044	−0·15	.....	.....
519	Br. 1137	10707	.....	−0·048	+0·08	.....	.....
520	BD + 30°, 1612	10720	.....	−0·041	−0·12	.....	.....
521	BD + 44°, 1693	10757	1209	−0·023	+0·07	−0·013	+0·02
522	Br. 1139	10776	.....	−0·016	+0·01	.....	.....
523	Pi 7h, 267	10801	.....	−0·047	−0·16	.....	.....
524	CD − 29°, 5236	10774	1210	−0·041	+0·57	−0·028	+0·37
525	BD − 18°, 2118	10825	1212	0·000	+0·79	+0·022	+0·88
526	BD + 9°, 1843	10880	.....	−0·009	+0·38	.....	.....
527	BD − 5°, 2339	10900	1213	−0·031	+0·01	−0·018	+0·08
528	8 Cancri	10959	.....	−0·036	+0·23	.....	.....
529	CD − 25°, 5530	10963	.....	−0·043	+0·13	.....	.....
530	BD − 0°, 1903	10986	.....	+0·017	+0·51	.....	.....
531	BD − 20°, 2395	11027	.....	−0·032	+0·52	.....	.....
532	ρ Pupp	11034	308	−0·038	+0·22	−0·018	+0·07
533	Pi 7h, 308	11073	1214	−0·054	−0·12	−0·026	−0·15
534	BD + 53°, 1221	11087	.....	−0·042	−0·27	.....	.....
535	Br. 1167	11091	.....	−0·005	+0·02	.....	.....
536	BD + 49°, 1711	11125	.....	−0·084	+0·37	.....	.....
537	BD + 15°, 1775	11114	.....	−0·008	+0·10	.....	.....
538	Br. 1177	11134	.....	−0·012	+0·19	.....	.....
539	Pi 7h, 311	11158	.....	−0·040	+0·11	.....	.....
540	Gr. 1391	11296	.....	−0·151	+0·00	.....	.....
541	Br. 1160	11302	.....	−0·099	−0·54	.....	.....
542	β Canc	11254	312	−0·032	+0·27	−0·010	+0·25
543	BD + 4°, 1945	11285	1216	−0·024	+0·36	−0·013	+0·43
544	Br. 1184	11299	.....	+0·015	+0·36	.....	.....
545	BD − 9°, 2471	11346	1218	0·000	−0·01	+0·027	−0·11
546	λ Canc	11363	.....	−0·025	+0·45	.....	.....
547	Pi 8h, 30	11381	.....	−0·106	+0·01	.....	.....
548	BD + 32°, 1725	11444	.....	−0·047	−0·28	.....	.....
549	Br. 1187	11454	.....	−0·033	+0·09	.....	.....
550	CD − 28°, 5961	11470	.....	−0·030	−0·22	.....	.....
551	Br. 1192	11494	.....	−0·035	+0·36	.....	.....
552	Pi 8h, 72	11491	1221	−0·023	+0·09	−0·021	−0·01
553	Pi 8h, 67	11505	.....	−0·027	+0·11	.....	.....
554	Br. 1197	11499	316	−0·038	+0·32	−0·010	+0·26
555	BD − 14°, 2517	11512	.....	−0·012	+0·16	.....	.....

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556	Br. 1199	11523	.....	−0·023	+0·12	.....	.....
557	Gr. 1119	12154	.....	−0·048	−0·10	.....	.....
558	BD + 26°, 1789	11609	.....	−0·011	−0·19	.....	.....
559	Br. 1204	11702	.....	−0·067	+0·19	.....	.....
561	Br. 1202	11817	.....	−0·098	−0·08	.....	.....
562	Gr. 1431	11900	.....	−0·055	−0·10	.....	.....
563	Br. 1213	11807	.....	−0·010	+1·22	.....	.....
564	BD − 18°, 2416	11813	.....	−0·050	+0·26	.....	.....
565	δ Hyda	11823	1223	−0·040	+0·36	−0·016	+0·27
566	BD + 51°, 1443	11882	.....	−0·012	+0·18	.....	.....
567	Br. 1220	11874	.....	−0·021	+0·15	.....	.....
568	Br. 1214	11903	1225	−0·092	−0·25	−0·060	−0·27
569	BD − 8°, 2452	11938	.....	−0·005	−0·14	.....	.....
570	η Hyda	11987	.....	−0·053	+0·12	.....	.....
571	δ Canc	12022	326	−0·043	+0·43	−0·015	+0·27
572	Br. 1233	12037	.....	−0·051	+0·12	.....	.....
573	Br. 1240	12041	.....	−0·055	+0·23	.....	.....
574	BD − 20°, 2667	12052	1229	−0·041	+0·88	−0·039	+0·15
575	BD − 10°, 2634	12086	.....	−0·028	−0·23	.....	.....
576	ε Hyda	12102	329	−0·015	−0·05	+0·008	−0·09
577	CD − 26°, 6417	12098	.....	−0·016	+0·53	.....	.....
578	Pi 8h, 167	12122	.....	−0·053	+0·44	.....	.....
579	Br. 1247	12221	.....	−0·082	+0·15	.....	.....
580	BD + 59°, 1198	12234	.....	−0·034	+0·17	.....	.....
581	BD + 78°, 297	12309	.....	−0·074	+0·18	.....	.....
582	BD − 8°, 2518	12305	.....	−0·004	−0·02	.....	.....
583	ζ Hyda	12327	334	−0·020	+0·30	+0·003	+0·32
584	BD − 17°, 2691	12331	1231	−0·025	+0·52	−0·009	+0·83
585	60 Canc	12339	.....	−0·054	+0·82	.....	.....
586	BD + 22°, 2029	12362	.....	−0·052	+0·16	.....	.....
587	ι U. Maj	12407	335	−0·085	+0·45	−0·061	+0·44
588	α Canc	12406	337	−0·039	+0·45	−0·017	+0·36
589	Gr. 1496	12432	.....	−0·055	+0·08	.....	.....
590	BD + 0°, 2449	12487	1235	−0·027	+0·12	−0·005	+0·05
591	κ U. Maj	12503	341	−0·064	−0·16	−0·033	−0·29
592	BD − 4°, 2530	12522	1236	+0·001	+0·13	+0·031	+0·07
593	BD + 84°, 196	12603	Nζ	+0·018	−0·26	+0·014	−0·06
594	ω Hyda	12564	.....	−0·054	+0·26	.....	.....
595	τ Canc	12593	.....	−0·065	−0·24	.....	.....
596	κ Canc	12596	1238	−0·030	+0·25	−0·001	+0·12
597	Br. 1286	12615	.....	−0·068	+0·21	.....	.....
598	τ U. Maj	12646	.....	−0·007	+1·06	.....	.....
599	CD − 26°, 6766	12636	.....	−0·067	+0·15	.....	.....
600	BD − 11°, 2565	12645	1240	+0·009	−0·11	+0·032	−0·01
602	Br. 1296	12685	.....	−0·028	−0·09	.....	.....
603	θ Hyda	12743	347	−0·020	+0·24	+0·003	+0·22
604	Br. 1297	12761	.....	−0·069	+0·41	.....	.....
605	Gr. 1522	12814	.....	−0·128	+0·27	.....	.....
606	Pi 9h, 19	12799	.....	−0·032	+0·22	.....	.....
607	BD + 1°, 2267	12796	.....	−0·011	+0·22	.....	.....

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608	Br. 1307	12800	.....	−0·024	+0·37	.....	.....
609	BD + 23°, 2072	12815	.....	−0·007	+0·34	.....	.....
610	BD − 16°, 2749	12849	.....	−0·034	+0·13	.....	.....
611	BD + 57°, 1214	12883	.....	−0·087	+0·18	.....	.....
612	α Lync	12880	352	−0·047	+0·20	−0·018	+0·15
613	BD + 13°, 2074	12899	.....	−0·037	−0·01	.....	.....
614	θ Pyxi	12916	1243	−0·041	+0·16	−0·032	+0·13
615	BD + 37°, 1978	12957	.....	−0·021	+0·07	.....	.....
616	Pi 9h, 75	12952	.....	−0·030	+0·95	.....	.....
617	Pi 9h, 74	12990	.....	−0·043	+0·37	.....	.....
618	CD − 24°, 8060	12997	.....	+0·006	−0·21	.....	.....
619	α Hyda	13044	354	−0·042	+0·59	−0·021	+0·62
620	Br. 1334	13080	.....	−0·038	+0·33	.....	.....
621	Br. 1331	13112	.....	−0·040	−0·05	.....	.....
622	1 H. Drac	13174	Ne	−0·055	−0·02	−0·074	−0·12
623	BD + 28°, 1768	13128	.....	−0·047	−0·32	.....	.....
624	θ U. Maj	13157	358	−0·030	+0·30	+0·006	+0·33
625	Br. 1339	13150	.....	−0·025	+0·11	.....	.....
626	BD + 2°, 2217	13172	.....	−0·020	+0·13	.....	.....
627	BD − 12°, 2926	13185	.....	+0·013	+0·81	.....	.....
628	Br. 1336	13212	.....	−0·017	+0·04	.....	.....
629	BD − 18°, 2728	13254	.....	−0·046	+0·42	.....	.....
630	BD + 67°, 602	13304	.....	−0·089	+0·20	.....	.....
631	BD + 43°, 1943	13318	.....	−0·046	−0·12	.....	.....
632	BD + 20°, 2351	13322	.....	−0·037	+0·16	.....	.....
633	ι Hyda	13341	1250	−0·029	+0·20	−0·007	+0·10
634	Br. 1358	13343	.....	−0·049	−1·04	.....	.....
635	o Leon	13366	365	−0·032	+0·40	−0·016	+0·25
636	Br. 1354	13372	.....	−0·061	−0·40	.....	.....
637	Gr. 1573	13379	.....	−0·042	+0·16	.....	.....
638	13 L. Min	13388	.....	−0·087	+0·03	.....	.....
639	ψ Leon	13414	1252	−0·034	−0·35	−0·015	−0·39
640	Pi 9h, 167	13433	.....	−0·039	+0·05	.....	.....
641	ε Leon	13443	367	−0·038	+0·10	−0·015	+0·06
642	BD + 19°, 2254	13444	1253	−0·067	−0·28	−0·045	−0·33
643	BD + 7°, 2181	13452	.....	−0·005	+0·30	.....	.....
644	υ U. Maj	13540	368	−0·058	+0·14	−0·025	+0·04
645	Br. 1382	13569	.....	−0·052	+0·30	.....	.....
646	BD + 61°, 1151	13613	.....	−0·054	+0·56	.....	.....
647	Br. 1391	13673	.....	−0·029	+0·46	.....	.....
648	BD − 6°, 3033	13674	1257	−0·014	+0·68	+0·006	+0·55
649	Gr. 1594	13735	.....	−0·031	0·00	.....	.....
650	BD + 22°, 2148	13740	.....	−0·076	+0·48	.....	.....
651	π Leon	13755	378	−0·020	+0·40	−0·001	+0·36
652	BD + 84°, 225	13814	.....	−0·002	+0·06	.....	.....
654	BD − 0°, 2285	13804	.....	+0·002	+0·35	.....	.....
655	CD − 23°, 8973	13848	1260	−0·039	+0·58	−0·025	+0·56
656	CD − 27°, 7179	13857	.....	−0·042	+0·38	.....	.....
658	Br. 1404	13888	.....	−0·033	+0·39	.....	.....
659	η Leon	13899	379	−0·026	+0·19	−0·001	+0·10

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660	α Leon	13926	380	−0·034	+0·32	−0·015	+0·26
661	Br. 1408	13939	.....	−0·034	+0·54	.....	.....
662	BD − 12°, 3101	13970	.....	+0·009	+0·56	.....	.....
663	Pi 9h, 254	13976	.....	−0·021	−0·19	.....	.....
664	Gr. 1619	13985	.....	−0·075	+0·03	.....	.....
665	λ Hyda	13982	381	−0·030	+0·19	−0·012	+0·18
666	BD + 28°, 1852	14014	.....	−0·019	+0·14	.....	.....
667	BD + 79°, 328	14041	.....	+0·026	+0·10	.....	.....
668	BD + 71°, 534	14102	.....	−0·033	+0·11	.....	.....
669	Br. 1424	14096	.....	−0·027	+0·12	.....	.....
670	λ U. Maj	14113	383	−0·034	−0·13	−0·022	−0·16
671	Br. 1426	14110	.....	−0·013	+0·05	.....	.....
672	BD − 18°, 2885	14116	.....	−0·075	+0·42	.....	.....
673	ε Sext	14129	1263	−0·021	+0·46	−0·003	+0·40
674	Gr. 1638	14181	.....	+0·003	+0·15	.....	.....
675	Br. 1435	14204	1266	−0·005	+0·04	+0·021	−0·07
676	μ U. Maj	14232	386	−0·081	+0·42	−0·061	+0·25
677	BD − 22°, 2904	14223	.....	−0·001	+0·54	.....	.....
678	Br. 1438	14252	1267	−0·015	+0·41	+0·012	+0·29
679	29 H. Caml	14305	.....	−0·032	−0·36	.....	.....
680	Pi 10h, 64	14301	.....	−0·005	−0·05	.....	.....
681	CD − 28°, 8164	14317	.....	−0·042	+1·02	.....	.....
682	30 H. Caml	14367	N*f*	−0·040	+0·04	+0·010	0·00
683	μ Hyda	14326	389	−0·040	+0·05	−0·026	+0·01
684	BD + 60°, 1263	14345	.....	−0·052	+0·60	.....	.....
685	α Antl	14352	392	−0·037	+1·21	−0·018	+0·92
686	BD + 16°, 2123	14380	.....	−0·020	−0·26	.....	.....
687	BD + 29°, 2057	14409	1271	−0·054	+0·05	−0·037	+0·07
688	Gr. 1658	14491	.....	−0·054	+0·66	.....	.....
689	ρ Leon	14487	396	−0·015	+0·32	+0·002	+0·30
690	Br. 1465	14501	.....	−0·046	+0·38	.....	.....
691	BD + 22°, 2236	14525	.....	−0·055	+0·25	.....	.....
692	BD + 2°, 2334	14543	.....	−0·016	−0·13	.....	.....
693	BD − 11°, 2918	14582	1274	−0·013	−0·05	−0·002	+0·07
694	BD − 8°, 2963	14596	.....	+0·010	+0·42	.....	.....
695	φ Hyda	14631	.....	−0·045	+0·29	.....	.....
696	BD + 47°, 1797	14659	.....	−0·056	+0·50	.....	.....
697	Br. 1458	14692	.....	−0·021	−0·21	.....	.....
699	Br. 1487	14745	.....	+0·003	+0·15	.....	.....
700	CD − 23°, 9500	14771	.....	−0·060	−0·32	.....	.....
701	Br. 1492	14813	1279	−0·032	−0·01	−0·007	−0·13
702	CD − 25°, 8237	14829	1280	+0·033	+0·62	+0·035	+0·71
703	BD − 1°, 2446	14877	.....	−0·018	+0·13	.....	.....
704	53 Leon	14889	409	−0·022	+0·33	−0·009	+0·15
705	Br. 1501	14897	.....	−0·068	−0·12	.....	.....
706	Pi 10h, 171	14937	.....	−0·027	+0·40	.....	.....
707	BD − 12°, 3293	14994	.....	−0·011	+0·14	.....	.....
708	Br. 1517	15022	.....	−0·007	+0·75	.....	.....
709	BD + 20°, 2538	15073	.....	−0·015	0·00	.....	.....
710	BD − 18°, 3072	15085	.....	−0·017	+1·14	.....	.....

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711	BD + 36°, 2139	15089	.....	−0·093	+0·22	.....	.....
712	BD − 9°, 3182	15091	.....	−0·052	−0·15	.....	.....
713	BD + 12°, 2284	15102	.....	+0·005	+0·46	.....	.....
714	58 Leon	15125	1284	−0·016	+0·21	−0·002	+0·03
715	β U. Maj	15145	416	+0·002	+0·31	+0·028	+0·25
716	BD + 62°, 1160	15179	.....	−0·063	−0·05	.....	.....
717	BD − 2°, 3270	15176	1285	−0·011	+0·91	+0·011	+0·89
718	α U. Maj	15185	417	−0·086	+0·30	−0·049	+0·27
719	BD + 32°, 2102	15223	.....	−0·046	+0·52	.....	.....
720	χ Leon	15235	418	−0·011	+0·40	+0·005	+0·29
721	BD − 10°, 3190	15256	1286	−0·042	+0·81	−0·026	+0·85
722	BD + 18°, 2452	15273	.....	−0·024	+0·17	.....	.....
723	BD − 20°, 3347	15274	.....	−0·031	+0·67	.....	.....
724	BD + 72°, 515	15304	.....	−0·037	−0·24	.....	.....
725	BD + 82°, 325	15335	.....	−0·007	+0·32	.....	.....
726	Br. 1541	15319	.....	−0·030	+0·28	.....	.....
727	Br. 1544	15325	.....	+0·009	+0·48	.....	.....
728	ψ U. Maj	15340	420	−0·033	+0·24	−0·012	+0·11
729	BD + 86°, 161	15376	Nη	−0·029	+0·12	+0·134	+0·06
731	BD + 69°, 602	15378	.....	−0·055	+0·28	.....	.....
732	β Crat	15385	421	−0·031	+0·13	−0·023	+0·06
733	Gr. 1746	15399	.....	−0·039	+0·05	.....	.....
734	δ Leon	15438	422	−0·068	−0·30	−0·048	−0·43
735	θ Leon	15441	423	−0·023	+0·19	−0·007	+0·03
736	Br. 1549	15460	.....	−0·020	+0·38	.....	.....
737	BD − 18°, 3141	15469	.....	−0·027	+1·30	.....	.....
738	Br. 1550	15487	.....	−0·003	−0·04	.....	.....
739	BD − 6°, 3344	15514	.....	−0·031	+0·56	.....	.....
740	Br. 1552	15520	.....	−0·023	+0·34	.....	.....
741	Br. 1555	15558	1293	−0·044	+0·84	−0·031	+0·78
742	BD − 0°, 2428	15566	.....	+0·012	+0·01	.....	.....
743	δ Crat	15567	426	−0·012	+0·50	+0·005	+0·39
744	σ Leon	15600	427	−0·003	+0·17	+0·012	−0·03
745	Br. 1565	15677	.....	+0·007	−0·39	.....	.....
747	BD + 27°, 2021	15682	1295	−0·051	−0·08	−0·037	0·00
748	BD + 9°, 2494	15694	.....	+0·009	−0·08	.....	.....
749	BD − 20°, 3420	15704	.....	−0·005	+0·54	.....	.....
750	CD − 27°, 8121	15767	1298	+0·008	+0·57	+0·023	+0·48
751	BD + 30°, 2163	15772	.....	+0·021	+0·42	.....	.....
752	Gr. 1782	15795	.....	−0·033	+0·02	.....	.....
753	λ Drac	15799	433	−0·057	+0·27	−0·040	+0·16
754	Br. 1582	15867	.....	−0·037	+0·36	.....	.....
755	BD + 21°, 2331	15879	.....	−0·029	+0·22	.....	.....
756	BD − 3°, 3144	15878	.....	−0·002	+0·56	.....	.....
757	BD + 11°, 2376	15889	.....	−0·023	+0·71	.....	.....
758	Grl 1803	15932	.....	−0·041	−0·41	.....	.....
759	υ Leon	15927	437	−0·010	+0·28	+0·005	+0·09
760	60 U. Maj	15970	.....	−0·043	+0·58	.....	.....
761	BD − 15°, 3323	16008	.....	−0·027	+0·84	.....	.....
762	BD − 7°, 3271	16027	.....	−0·047	−0·10	.....	.....

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763	BD + 36°, 2216	16127	.....	−0·038	+0·57	.....	.....
764	χ U. Maj	16137	441	+0·004	+0·06	+0·019	−0·09
765	Gr. 1825	16153	.....	−0·065	+0·33	.....	.....
766	Gr. 1826	16158	1303	−0·066	+0·24	−0·028	+0·32
767	Br. 1602	16171	.....	−0·036	+0·51	.....	.....
768	BD + 29°, 2214	16177	.....	−0·032	+0·55	.....	.....
769	β Leon	16189	444	−0·035	+0·31	−0·020	+0·17
770	β Virg	16215	445	−0·012	+0·36	+0·004	+0·18
771	CD − 26°, 8807	16214	.....	−0·008	+0·88	.....	.....
772	Pi 11h, 167	16220	1306	−0·018	+0·40	−0·015	+0·20
773	BD − 11°, 3190	16231	.....	−0·012	+2·00	.....	.....
776	Pi 11h, 170	16255	.....	−0·018	−0·17	.....	.....
777	γ U. Maj	16268	447	−0·038	+0·14	−0·018	+0·03
778	η Crat	16319	1309	−0·014	+0·27	+0·005	+0·24
779	BD + 41°, 2252	16345	.....	−0·019	+0·41	.....	.....
780	Gr. 1841	16347	.....	−0·032	+0·41	.....	.....
781	BD + 33°, 2174	16368	1310	−0·052	+0·30	−0·030	+0·20
782	BD + 20°, 2664	16410	.....	−0·020	+0·29	.....	.....
783	BD − 9°, 3413	16421	.....	−0·055	−0·11	.....	.....
784	π Virg	16425	1311	−0·014	+0·15	+0·002	+0·01
785	BD + 13°, 2482	16428	.....	−0·007	+0·40	.....	.....
786	BD + 65°, 863	16437	.....	−0·140	+0·87	.....	.....
787	Gr. 1850	16496	Nθ	−0·102	+0·44	−0·170	+0·35
788	o Virg	16512	450	−0·014	+0·42	−0·003	+0·19
789	BD + 49°, 2110	16537	.....	−0·064	+0·31	.....	.....
790	BD − 11°, 3238	16549	.....	−0·011	+0·07	.....	.....
791	Pi 11h, 234	16554	.....	−0·011	+0·46	.....	.....
792	Gr. 1854	16603	.....	−0·018	+0·14	.....	.....
793	Br. 1627	16616	.....	+0·013	+0·23	.....	.....
794	Br. 1628	16625	1313	−0·030	+0·16	−0·011	+0·07
795	BD − 1°, 2632	16642	.....	+0·011	+0·39	.....	.....
796	Br. 1630	16659	.....	−0·006	+0·01	.....	.....
798	Br. 1635	16693	.....	0·000	+0·22	.....	.....
799	γ Corv	16740	457	+0·004	+1·13	+0·020	+1·01
800	Gr. 1865	16744	.....	+0·008	+0·21	.....	.....
801	Br. 1641	16752	.....	−0·026	−0·02	.....	.....
802	BD − 15°, 3442	16762	.....	+0·002	+0·17	.....	.....
803	Br. 1672	16763	.....	+0·160	−0·13	.....	.....
804	BD + 31°, 2350	16789	.....	−0·025	+0·37	.....	.....
805	Br. 1643	16790	.....	+0·006	+0·25	.....	.....
806	Br. 1644	16798	1315	−0·020	+0·20	−0·002	+0·01
807	η Virg	16813	460	−0·009	+0·63	+0·005	+0·42
808	Br. 1655	16843	.....	+0·009	−0·03	.....	.....
809	Br. 1662	16906	.....	−0·036	+0·11	.....	.....
810	CD − 27°, 8670	16936	1319	−0·031	+0·45	−0·029	+0·63
811	Gr. 1888	16941	.....	−0·058	+0·56	.....	.....
812	BD + 18°, 2611	16976	.....	−0·041	+0·81	.....	.....
813	Gr. 1894	16978	.....	−0·039	−0·12	.....	.....
814	BD + 26°, 2353	17007	.....	−0·021	+0·25	.....	.....
815	Br. 1673	17012	.....	−0·027	−0·16	.....	.....

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816	δ Corv.	17029	465	−0·033	+0·80	−0·018	+0·56
817	Pi 12h, 105	17039	.....	−0·069	+0·55	.....	.....
818	Pi 12 h, 108	17050	.....	−0·007	+0·22	.....	.....
819	BD + 8°, 2609	17063	.....	+0·004	−0·08	.....	.....
820	Br. 1682	17103	.....	−0·016	+0·55	.....	.....
821	BD − 12°, 3659	17113	1321	−0·006	+0·25	+0·004	+0·14
822	Gr. 1904	17116	.....	−0·054	−0·35	.....	.....
823	β Corv.	17133	471	−0·036	+0·24	−0·020	+0·08
824	24 Coma	17147	473	−0·028	+0·05	−0·010	−0·12
825	BD + 46°, 1797	17171	.....	−0·039	+0·90	.....	.....
826	25 Virg.	17180	1324	−0·029	+0·14	−0·021	0·00
827	Pi 12h, 142	17209	.....	−0·034	+0·39	.....	.....
828	BD − 17°, 3668	17216	.....	−0·003	+0·48	.....	.....
829	χ Virg.	17227	475	−0·009	+0·38	+0·002	+0·23
830	Br. 1695	17225	.....	−0·018	+0·06	.....	.....
831	BD + 34°, 2344	17285	.....	−0·044	+0·12	.....	.....
832	BD − 2°, 3567	17319	.....	−0·018	−0·02	.....	.....
833	Gr. 1927	17347	.....	−0·069	−0·31	.....	.....
834	CD − 24°, 10540	17380	1329	+0·008	+1·16	+0·006	+1·17
835	CD − 26°, 9340	17391	.....	−0·058	−0·32	.....	.....
836	Br. 1711	17410	.....	−0·071	−0·04	.....	.....
837	31 Coma	17455	1332	−0·026	−0·04	−0·016	−0·19
838	Br. 1716	17464	1333	−0·043	+0·27	−0·025	+0·03
839	32² H. Caml.	17443	.....	−0·101	−0·12	.....	.....
840	BD + 17°, 2553	17466	.....	−0·011	−0·80	.....	.....
841	BD − 17°, 3726	17506	1334	−0·031	+0·20	−0·011	+0·06
842	Br. 1720	17502	.....	−0·006	−0·14	.....	.....
844	ε U. Maj.	17518	483	−0·030	+0·53	−0·014	+0·33
845	BD + 0°, 3002	17542	.....	+0·015	+0·18	.....	.....
846	δ Virg.	17543	484	−0·026	+0·28	−0·014	+0·08
847	BD − 14°, 3605	17548	.....	+0·002	+0·91	.....	.....
848	α C. Ven.	17557	485	−0·070	+0·83	−0·057	+0·65
849	Br. 1726	17567	.....	−0·064	+0·46	.....	.....
850	Gr. 1938	17572	.....	−0·064	−0·04	.....	.....
851	BD − 6°, 3705	17599	.....	−0·014	−0·09	.....	.....
852	Br. 1729	17631	1336	−0·055	−0·11	−0·037	−0·27
853	BD + 76°, 473	17637	.....	−0·031	+0·07	.....	.....
854	BD + 32°, 2311	17652	.....	−0·033	−0·18	.....	.....
855	Br. 1736	17664	.....	−0·023	+0·14	.....	.....
856	ε Virg.	17687	488	+0·002	−0·15	+0·018	−0·33
857	BD + 23°, 2530	17699	.....	−0·032	+0·42	.....	.....
858	BD − 13°, 3651	17746	.....	−0·042	−0·09	.....	.....
859	Gr. 1956	17758	1338	−0·027	+0·03	−0·005	−0·03
860	Br. 1743	17787	.....	−0·023	−0·24	.....	.....
861	BD − 22°, 3513	17806	.....	−0·048	+0·49	.....	.....
862	ψ Hyda	17813	.....	−0·061	+0·39	.....	.....
863	BD + 6°, 2697	17811	.....	+0·031	+0·46	.....	.....
864	θ Virg.	17828	490	−0·014	+0·22	−0·001	+0·03
865	BD + 17°, 2595	17825	.....	−0·025	+0·66	.....	.....
866	Gr. 1965	17837	.....	−0·022	+0·04	.....	.....

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867	CD − 25°, 9653	17861	1341	−0·021	+0·44	+0·022	+0·41
868	β Coma	17874	492	−0·035	+0·53	−0·026	+0·44
869	Gr. 1974	17934	.....	−0·145	+0·47	.....	.....
870	Gr. 1977	17932	.....	−0·023	−0·15	.....	.....
871	BD + 20°, 2814	17970	.....	+0·016	−0·14	.....	.....
872	Br. 1760	17975	.....	−0·044	+0·22	.....	.....
873	BD − 7°, 3582	17996	.....	−0·026	+0·41	.....	.....
874	σ Virg	17995	1344	−0·024	+0·20	−0·013	−0·03
875	BD + 4°, 2721	18015	.....	+0·008	+0·52	.....	.....
876	BD + 35°, 2435	18023	.....	−0·034	−0·03	.....	.....
877	23 C. Ven	18048	1346	−0·038	+0·27	−0·024	+0·15
878	BD − 20°, 3818	18120	.....	−0·030	+0·05	.....	.....
879	ζ U. Maj	18133	497	−0·048	+0·41	−0·023	+0·18
880	α Virg	18144	498	−0·002	+0·70	+0·001	+0·57
881	BD + 16°, 2508	18154	.....	−0·018	+0·02	.....	.....
882	BD − 0°, 2686	18163	.....	+0·002	−0·02	.....	.....
883	BD − 11°, 3516	18168	1348	−0·051	−0·04	−0·036	−0·14
884	BD + 31°, 2493	18214	1350	−0·007	+0·01	+0·002	−0·16
885	BD + 53°, 1622	18213	.....	−0·009	−0·04	.....	.....
886	BD + 7°, 2655	18249	.....	−0·008	+0·21	.....	.....
887	BD + 27°, 2262	18273	.....	−0·060	+0·06	.....	.....
888	CD − 28°, 10128	18295	.....	−0·001	+0·70	.....	.....
889	Br. 1786	18309	.....	−0·027	+0·41	.....	.....
890	ζ Virg	18351	501	−0·014	+0·35	+0·001	+0·17
891	Br. 1791	18356	.....	−0·057	+0·43	.....	.....
892	BD + 44°, 2285	18370	1353	−0·057	+0·21	−0·030	+0·01
893	BD + 3°, 2799	18419	.....	+0·018	+0·52	.....	.....
894	BD + 23°, 2591	18433	.....	−0·055	+0·13	.....	.....
895	BD + 11°, 2589	18466	.....	−0·002	+0·44	.....	.....
896	BD − 15°, 3715	18468	.....	0·000	+0·36	.....	.....
897	Pi 13h, 159	18502	1354	−0·015	+0·21	−0·006	+0·01
898	Br. 1802	18504	.....	−0·024	−0·14	.....	.....
899	Pi 13h, 184	18527	.....	+0·004	+0·04	.....	.....
900	BD + 35°, 2474	18539	.....	−0·044	+0·02	.....	.....
901	Pi 13h, 174	18562	.....	−0·018	+0·21	.....	.....
902	BD − 11°, 3591	18604	.....	−0·006	+0·11	.....	.....
903	Br. 1808	18623	1358	−0·046	+0·40	−0·028	+0·29
904	τ Boot	18637	507	−0·033	+0·33	−0·019	+0·14
905	Gr. 2063	18611	Nι	−0·203	+0·09	−0·203	+0·23
906	η U. Maj	18643	509	+0·008	+0·36	+0·020	+0·22
907	CD − 28°, 10277	18681	.....	−0·064	+0·34	.....	.....
908	BD + 9°, 2814	18680	1359	−0·005	−0·21	−0·004	−0·42
909	BD + 19°, 2719	18692	.....	−0·030	+0·20	.....	.....
910	Gr. 2055	18704	.....	−0·057	+0·12	.....	.....
911	BD + 40°, 2701	18742	.....	−0·046	−0·09	.....	.....
912	η Boot	18805	513	−0·034	+0·20	−0·020	+0·01
913	BD − 8°, 3667	18823	.....	+0·007	+0·06	.....	.....
914	BD + 14°, 2680	18830	.....	−0·039	+0·47	.....	.....
915	BD + 32°, 2411	18843	1360	−0·012	−0·08	+0·007	−0·25
916	Br. 1828	18900	.....	−0·021	+0·46	.....	.....

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				s	″	s	″
917	Pi 13h, 269	18919	1362	−0·011	+0·82	+0·001	+0·59
918	τ Virg	18945	516	−0·019	+0·56	−0·003	+0·33
919	BD − 16°, 3785	18974	.....	−0·007	−0·15	.....	.....
920	BD − 21°, 3824	18986	.....	−0·058	+0·82	.....	.....
921	BD + 5°, 2836	18993	.....	−0·026	−0·01	.....	.....
922	Pi 13h, 296	18990	.....	+0·001	+0·14	.....	.....
923	Pi 13h, 286	18999	1365	−0·018	+0·32	−0·005	+0·22
924	π Hyda	19029	519	−0·012	+0·63	0·000	+0·45
925	α Drac	19019	521	−0·045	−0·07	+0·004	−0·15
927	BD + 39°, 2720	19048	1367	−0·030	−0·02	−0·020	−0·28
928	Br. 1838	19095	.....	−0·019	+0·25	.....	.....
929	CD − 30°, 11209	19111	.....	0·000	+0·01	.....	.....
930	Br. 1837	19163	.....	−0·033	+0·35	.....	.....
931	κ Virg	19168	523	−0·021	+0·75	−0·007	+0·52
932	Gr. 2091	19189	.....	−0·071	−0·55	.....	.....
933	BD + 4°, 2841	19223	.....	−0·008	+0·07	.....	.....
934	BD + 22°, 2678	19224	.....	−0·017	+0·11	.....	.....
935	ι Virg	19244	525	−0·014	+0·09	−0·004	−0·11
936	α Boot	19242	526	−0·024	+0·37	−0·007	+0·07
937	λ Boot	19273	527	−0·071	+0·53	−0·051	+0·28
938	BD + 57°, 1498	19267	.....	−0·039	+0·30	.....	.....
940	BD − 6°, 3964	19289	.....	+0·006	+0·57	.....	.....
941	BD − 18°, 3789	19295	1369	−0·027	+0·37	−0·014	+0·16
942	λ Virg	19311	1371	−0·008	+0·76	0·000	+0·67
943	BD + 13°, 2782	19319	1372	−0·018	+0·19	−0·008	+0·05
944	Gr. 2098	19322	.....	−0·037	−0·22	.....	.....
945	BD + 31°, 2605	19345	.....	−0·045	+0·03	.....	.....
946	BD + 8°, 2857	19417	.....	−0·026	+0·51	.....	.....
947	Pi 14h 68	19435	1376	−0·019	+0·55	−0·017	+0·48
948	BD − 12°, 4042	19446	.....	+0·007	+0·49	.....	.....
949	θ Boot	19467	531	+0·005	+0·26	+0·019	+0·06
950	φ Virg	19504	533	−0·008	+0·33	−0·003	+0·13
951	CD − 28°, 10724	19520	.....	+0·047	+0·42	.....	.....
952	BD + 36°, 2495	19519	.....	−0·052	−0·07	.....	.....
953	BD + 28°, 2332	19522	.....	−0·007	−0·45	.....	.....
954	ρ Boot	19597	534	−0·033	−0·11	−0·015	−0·37
955	γ Boot	19607	535	−0·061	+0·31	−0·047	+0·17
956	BD + 81°, 482	19630	.....	+0·081	−0·59	.....	.....
957	Gr. 2132	19660	.....	−0·119	−0·30	.....	.....
958	BD + 50°, 2095	19668	.....	−0·011	−0·08	.....	.....
959	BD + 23°, 2710	19687	.....	−0·044	+0·39	.....	.....
960	Pi 14h, 127	19695	1381	−0·028	−0·09	−0·031	−0·17
961	BD + 2°, 2844	19704	.....	−0·027	+0·35	.....	.....
962	Pi 14h, 156	19742	.....	−0·028	+0·10	.....	.....
963	Br. 1879	19793	1382	−0·044	+0·94	−0·025	+0·77
964	BD − 18°, 3882	19806	.....	−0·051	+0·65	.....	.....
965	μ Virg	19816	545	−0·009	+0·56	+0·006	+0·45
966	BD − 7°, 3897	19836	.....	−0·011	+0·30	.....	.....
967	ε Boot	19856	.....	−0·050	+0·18	.....	.....
968	BD − 22°, 3844	19871	.....	−0·037	+0·65	.....	.....

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969	BD + 33°, 2489	19867	1384	−0·070	−0·18	−0·055	−0·18
970	109 Virg.	19884	547	−0·016	+0·62	−0·006	+0·30
971	BD + 15°, 2758	19885	.....	−0·054	+0·24	.....	.....
972	Br. 1886	19904	1385	−0·039	−0·13	−0·024	−0·58
973	BD − 0°, 2886	19932	.....	−0·044	+0·04	.....	.....
974	α^1 Libr.	19970	1387	−0·007	+1·64	+0·003	+1·52
975	α^2 Libr.	19975	548	−0·035	+0·66	−0·022	+0·47
976	Pi 14^h, 193	19966	.....	−0·051	+0·57	.....	.....
977	Gr. 2154	19982	.....	−0·053	+0·56	.....	.....
978	CD − 30°, 11780	19999	.....	−0·023	+0·28	.....	.....
979	BD + 6°, 2957	20039	1388	+0·039	−0·06	+0·052	−0·42
980	β U. Min.	20029	550	−0·084	−0·21	−0·026	−0·35
981	BD + 41°, 2539	20097	.....	−0·038	−0·14	.....	.....
982	BD + 22°, 2764	20120	1392	−0·037	−0·17	−0·030	−0·35
983	Br. 1908	20122	1393	−0·019	+0·56	+0·001	+0·30
984	Pi 14^h, 223	20130	.....	+0·003	+0·13	.....	.....
985	BD + 14°, 2812	20147	.....	−0·007	−0·04	.....	.....
986	Gr. 2196	20087	Nκ	−0·005	−0·13	−0·001	−0·18
987	δ Libr.	20195	1394	+0·009	+0·45	+0·016	+0·30
988	BD − 7°, 3943	20215	.....	−0·038	+0·27	.....	.....
989	β Boot.	20226	555	−0·047	+0·26	−0·031	−0·01
990	BD + 72°, 664	20236	.....	−0·092	−0·03	.....	.....
991	Gr. 2283	20088	.....	−0·354	+0·07	.....	.....
992	BD − 21°, 4030	20305	.....	+0·027	+0·47	.....	.....
993	BD − 12°, 4198	20310	.....	−0·028	+0·68	.....	.....
994	Br. 1925	20308	1395	−0·039	+0·44	−0·017	+0·12
995	BD + 19°, 2924	20340	.....	−0·061	+0·34	.....	.....
996	BD + 6°, 3001	20346	.....	−0·087	+0·21	.....	.....
997	Br. 1926	20367	.....	−0·023	+0·74	.....	.....
998	BD + 34°, 2604	20369	.....	−0·072	+0·42	.....	.....
999	BD − 4°, 3818	20384	.....	+0·017	+0·48	.....	.....
1000	CD − 25°, 10758	20389	.....	−0·041	+1·08	.....	.....
1001	Gr. 2194	20380	.....	−0·016	+0·73	.....	.....
1002	Gr. 2197	20381	.....	−0·050	+0·20	.....	.....
1003	Gr. 2205	20492	.....	−0·045	+0·30	.....	.....
1004	β Libr.	20539	564	−0·020	+0·75	−0·007	+0·55
1005	BD + 37°, 2625	20543	.....	−0·052	+0·85	.....	.....
1006	BD + 69°, 789	20544	.....	−0·096	+0·30	.....	.....
1007	Pi 15h, 36	20575	1400	−0·006	+0·24	+0·009	+0·05
1008	BD + 10°, 2823	20579	1401	−0·040	+0·61	−0·022	+0·37
1009	Br. 1939	20628	.....	−0·049	+0·69	.....	.....
1010	BD − 6°, 4181	20638	.....	+0·020	+0·32	.....	.....
1011	Br. 1940	20637	.....	+0·043	+0·52	.....	.....
1012	CD − 26°, 10842	20678	1404	−0·065	+0·80	−0·067	+0·68
1013	Pi 15^h, 54	20695	.....	−0·035	+0·17	.....	.....
1014	Br. 1945	20697	1406	−0·012	+0·54	0·000	+0·29
1015	γ U. Min.	20692	569	−0·083	+0·11	−0·036	−0·07
1016	Pi 15^h, 83	20786	.....	−0·039	+0·14	.....	.....
1017	BD − 20°, 4246	20834	.....	−0·019	+0·71	.....	.....
1018	Gr. 2240	20833	.....	−0·031	+0·83	.....	.....

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1019	BD + 9°, 3055	20850	1408	−0·029	+0·65	−0·011	+0·33
1020	BD + 31°, 2742	20848	.....	−0·043	+0·16	.....	.....
1021	γ Libr.	20949	577	−0·025	+1·01	−0·011	+0·80
1022	α Cor. B.	20947	578	−0·056	+0·14	−0·040	−0·16
1023	BD + 11°, 2826	20968	.....	+0·083	+0·13	.....	.....
1024	θ U. Min.	20952	.....	−0·114	+0·15	.....	.....
1025	BD + 81°, 517	20951	.....	−0·014	+0·12	.....	.....
1026	Br. 1975	21031	.....	−0·043	+1·10	.....	.....
1028	Pi 15ʰ, 153	21044	1412	−0·045	+0·46	−0·030	+0·17
1029	BD + 35°, 2711	21048	.....	−0·036	+0·68	.....	.....
1030	BD − 5°, 4143	21095	.....	−0·001	+0·90	.....	.....
1031	Br. 1987	21129	.....	+0·005	+0·77	.....	.....
1032	ψ Serp.	21155	.....	+0·038	+0·37	.....	.....
1033	α Serp.	21158	582	+0·007	+0·35	+0·017	0·00
1034	Gr. 2270	21154	.....	−0·055	+0·45	.....	.....
1035	Br. 1993	21164	.....	−0·011	+0·65	.....	.....
1036	CD − 27°, 10550	21182	.....	+0·034	+0·82	.....	.....
1037	β Serp.	21194	583	−0·029	+0·54	−0·018	+0·25
1038	λ Serp.	21201	.....	−0·004	−0·27	.....	.....
1039	CD − 23°, 12525	21235	.....	+0·015	+1·36	.....	.....
1040	Br. 1999	21251	.....	−0·001	+0·34	.....	.....
1041	R C. Bor.	21257	.....	−0·033	−0·26	.....	.....
1042	μ Serp.	21269	585	−0·021	+0·53	−0·011	+0·42
1043	ζ U. Min.	21243	590	−0·021	+0·04	+0·047	−0·01
1044	ε Serp.	21288	588	−0·019	+0·64	−0·011	+0·33
1045	Gr. 2315	21295	Nλ	−0·073	+0·60	+0·028	+0·51
1046	Pi 15ʰ, 212	21368	.....	−0·050	+0·08	.....	.....
1047	γ Serp.	21408	591	−0·036	+0·45	−0·025	+0·23
1048	φ Serp.	21428	.....	−0·019	+0·40	.....	.....
1049	π Scor.	21447	592	−0·013	+0·95	−0·002	+0·67
1050	BD − 5°, 4210	21487	.....	−0·016	−0·03	.....	.....
1051	δ Scor.	21489	594	−0·078	+0·50	−0·071	+0·32
1052	BD + 31°, 2805	21519	.....	−0·048	−0·18	.....	.....
1053	CD − 28°, 11817	21540	.....	−0·058	+0·39	.....	.....
1054	Pi 15ʰ, 237	21556	.....	−0·053	+0·63	.....	.....
1055	Pi 15h, 266	21590	.....	−0·048	+0·70	.....	.....
1056	β Scor.	21609	597	−0·051	+1·28	−0·41	+1·09
1057	BD + 59°, 1697	21604	.....	−0·091	−0·25	.....	.....
1058	Br. 2042	21667	.....	−0·004	+0·67	.....	.....
1059	CD − 23°, 12731	21694	.....	−0·027	+0·72	.....	.....
1060	κ Herc.	21696	1421	−0·014	+0·50	−0·008	+0·30
1061	BD + 6°, 3169	21724	1422	+0·001	+0·19	+0·015	−0·44
1062	BD + 45°, 2374	21715	.....	−0·028	+0·32	.....	.....
1063	BD + 41°, 2673	21743	.....	−0·054	+0·11	.....	.....
1064	BD + 27°, 2595	21751	.....	−0·035	−0·36	.....	.....
1065	BD − 1°, 3149	21826	.....	−0·007	+0·51	.....	.....
1066	δ Ophi.	21838	603	−0·005	+0·76	+0·007	+0·55
1067	13 Herc.	21858	.....	−0·021	+0·75	.....	.....
1068	Br. 2067	21864	.....	+0·068	+0·13	.....	.....
1069	Br. 2075	21887	1425	−0·026	+0·51	−0·013	+0·26

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				s	″	s	″
1070	Pi 16h, 31	21910	.....	−0·005	+0·74	.....	.....
1071	Gr. 2325	21897	.....	−0·064	+0·58	.....	.....
1072	ε Ophi	21920	605	−0·012	+0·38	−0·004	+0·13
1073	Br. 2099	21880	.....	−0·132	+0·61	.....	.....
1074	BD + 32°, 2702	21924	.....	−0·041	+0·13	.....	.....
1075	BD − 18°, 4260	21950	.....	+0·018	+1·02	.....	.....
1076	σ Scor	21982	607	−0·008	+1·42	−0·001	+1·19
1077	τ Herc	21987	608	−0·010	+0·28	0·000	+0·06
1078	σ Serp	22007	1427	+0·040	+0·68	+0·043	+0·54
1079	γ Herc	22012	609	−0·020	+0·37	−0·005	+0·17
1080	BD − 2°, 4179	22064	.....	+0·024	−0·20	.....	.....
1081	η Drac	22101	615	−0·036	−0·04	−0·011	−0·18
1082	α Scor	22157	616	−0·085	+0·47	−0·080	+0·17
1083	BD − 14°, 4433	22171	1430	−0·012	+0·84	−0·006	+0·65
1084	BD + 29°, 2834	22165	.....	−0·025	+0·19	.....	.....
1085	CD − 27°, 10967	22178	.....	+0·009	+1·22	.....	.....
1086	Br. 2092	22179	.....	−0·012	+1·10	.....	.....
1087	BD + 6°, 3236	22183	.....	+0·010	+0·98	.....	.....
1088	β Herc	22193	618	−0·016	+0·34	−0·009	+0·14
1090	BD + 35°, 2828	22224	.....	−0·072	+0·50	.....	.....
1091	τ Scor	22303	620	−0·040	+1·05	−0·032	+0·84
1092	Pi 16h, 140	22281	1432	−0·064	+0·74	−0·036	+0·53
1093	BD + 17°, 3053	22314	.....	−0·016	+0·09	.....	.....
1094	ζ Ophi	22332	622	−0·014	+0·87	−0·001	+0·66
1095	BD + 23°, 2965	22345	.....	−0·009	+0·11	.....	.....
1096	Gr. 2362	22344	.....	−0·072	+0·50	.....	.....
1097	BD − 6°, 4467	22360	.....	−0·035	+0·31	.....	.....
1098	BD + 13°, 3177	22361	.....	−0·029	−0·03	.....	.....
1100	BD + 80°, 519	22337	.....	−0·072	−0·36	.....	.....
1101	Gr. 2369	22398	.....	−0·073	+0·37	.....	.....
1102	Pi 16h, 159	22520	.....	−0·007	+1·51	.....	.....
1103	η Herc	22502	626	−0·047	+0·55	−0·037	+0·21
1104	Pi 16h, 177	22522	.....	−0·039	+0·46	.....	.....
1105	Br. 2131	22560	.....	+0·005	+0·34	.....	.....
1106	Br. 2135	22592	1436	−0·010	+0·33	+0·004	+0·08
1107	BD − 4°, 4165	22622	.....	+0·008	+0·64	.....	.....
1108	BD − 21°, 4422	22629	1437	−0·036	+0·68	−0·021	+0·53
1109	BD + 53,° 1897	22672	.....	−0·050	+0·02	.....	.....
1110	Br. 2145	22682	.....	−0·034	−0·02	.....	.....
1111	BD + 18°, 3261	22732	.....	−0·012	+0·17	.....	.....
1113	Br. 2146	22783	.....	−0·032	+0·24	.....	.....
1114	ε U. Min	22749	N*g*	−0·055	+0·20	+0·031	+0·04
1115	BD + 14°, 3155	22861	.....	+0·005	+0·38	.....	.....
1116	κ Ophi	22862	633	0·000	+0·76	+0·009	+0·51
1117	BD + 24°, 3095	22870	.....	−0·044	+0·97	.....	.....
1118	Gr. 2406	22843	.....	−0·104	+0·25	.....	.....
1119	Br. 2169	22871	.....	−0·149	+0·07	.....	.....
1120	ε Herc	22935	634	−0·045	+0·16	−0·034	−0·18
1121	Br. 2158	22951	.....	−0·015	+0·68	.....	.....
1122	BD + 19°, 3218	23028	.....	+0·023	+1·85	.....	.....

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1123	Pi 16h, 292	23046	.....	−0·022	+0·40	.....	.....
1124	Br. 2162	23065	.....	−0·024	+0·78	.....	.....
1125	Pi 16h, 284	23081	1447	−0·058	+1·13	−0·049	+1·02
1126	Pi 16h, 307	23073	1448	−0·039	+0·59	−0·032	+0·34
1127	Pi 16h, 310	23071	.....	−0·067	+0·43	.....	.....
1128	Pi 16h, 303	23120	.....	+0·013	+0·27	.....	.....
1129	BD + 31°, 2967	23127	.....	−0·069	−0·03	.....	.....
1130	BD + 28°, 2667	23135	.....	−0·028	+0·41	.....	.....
1131	η Ophi	23158	637	−0·011	+0·90	−0·005	+0·70
1132	BD − 14°, 4565	23194	.....	+0·016	+0·66	.....	.....
1133	BD + 8°, 3367	23199	1451	−0·010	+0·89	−0·004	+0·63
1134	BD + 21°, 3070	23248	.....	−0·031	+0·19	.....	.....
1135	α^1 Herc	23277	640	−0·024	+0·39	−0·012	+0·15
1136	BD − 9°, 4525	23293	.....	−0·005	+0·08	.....	.....
1137	Pi 17h, 61	23266	.....	−0·093	+0·51	.....	.....
1138	BD + 1°, 3408	23317	1453	−0·006	+0·28	+0·007	+0·13
1139	BD + 39°, 3098	23352	.....	−0·040	+0·21	.....	.....
1140	Br. 2191	23382	.....	−0·004	+0·10	.....	.....
1141	Pi 17h, 43	23396	.....	+0·008	+0·20	.....	.....
1142	Gr. 2437	23397	.....	−0·036	−0·24	.....	.....
1143	θ Ophi	23451	644	−0·018	+0·90	−0·012	+0·73
1144	Pi 17h, 76	23533	.....	−0·021	+0·98	.....	.....
1145	BD − 1°, 3329	23598	1458	−0·006	+1·20	−0·008	+1·05
1146	BD + 16°, 3183	23603	.....	−0·062	+0·25	.....	.....
1147	BD + 50°, 2400	23591	.....	−0·067	+0·69	.....	.....
1148	BD + 7°, 3368	23614	.....	−0·018	+1·02	.....	.....
1149	σ Ophi	23621	1459	−0·002	+0·43	+0·008	+0·21
1150	Pi 17h, 90	23627	.....	−0·061	+0·75	.....	.....
1151	BD + 27°, 2809	23619	.....	−0·018	+0·06	.....	.....
1152	BD + 58°, 1731	23654	.....	−0·070	+0·28	.....	.....
1153	Gr. 2456	23599	.....	−0·117	−0·38	.....	.....
1154	β Drac	23741	653	−0·067	+0·00	−0·046	−0·28
1155	BD − 5°, 4461	23788	.....	+0·001	+0·65	.....	.....
1156	BD − 11°, 4411	23816	1461	+0·006	+0·10	+0·012	−0·06
1157	α Ophi	23837	656	−0·015	+0·38	−0·007	+0·09
1158	BD + 41°, 2856	23845	.....	−0·058	+0·65	.....	.....
1159	BD + 12°, 3256	23853	.....	+0·000	+0·67	.....	.....
1160	Pi 17h, 156	23882	.....	−0·013	+0·94	.....	.....
1161	BD + 30°, 3033	23879	.....	−0·031	+0·68	.....	.....
1162	Br. 2223	23901	.....	−0·052	+0·27	.....	.....
1163	Br. 2227	23894	.....	−0·037	+0·83	.....	.....
1164	BD + 3°, 3465	23929	.....	−0·017	+0·14	.....	.....
1165	BD + 36°, 2912	23921	.....	−0·090	+0·32	.....	.....
1166	ι Herc	23965	663	−0·059	+0·28	−0·048	+0·07
1167	β Ophi	24048	665	−0·012	+0·36	−0·008	+0·09
1168	BD − 22°, 4423	24147	.....	−0·009	+1·91	.....	.....
1169	BD − 14°, 4770	24148	.....	−0·027	+1·27	.....	.....
1170	μ Herc	24138	667	−0·035	+0·59	−0·029	+0·41
1171	Pi 17h, 223	24160	.....	−0·009	+2·05	.....	.....
1172	BD + 17°, 3334	24150	.....	−0·053	+0·58	.....	.....

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				s	″	s	″
1173	γ Ophi	24162	668	−0·005	+0·60	−0·006	+0·30
1174	Br. 2239	24199	.....	−0·038	+0·19	.....	.....
1175	BD + 9°, 3485	24219	1466	−0·029	+0·56	−0·006	+0·28
1176	BD + 80°, 555	24180	.....	+0·037	+0·12	.....	.....
1177	BD − 1°, 3412	24271	.....	+0·028	+0·59	.....	.....
1178	BD − 7°, 4523	24356	1467	+0·010	+0·99	+0·014	+0·80
1179	BD + 22°, 3237	24392	.....	−0·040	+0·04	.....	.....
1180	BD + 55°, 1995	24410	.....	−0·025	+0·66	.....	.....
1181	BD + 33°, 2995	24437	.....	−0·072	−0·20	.....	.....
1182	γ Drac	24432	676	−0·067	+0·21	−0·050	+0·02
1183	ν Ophi	24468	673	−0·010	+0·79	−0·007	+0·66
1184	BD + 14°, 3374	24461	.....	−0·048	−0·16	.....	.....
1185	BD + 62°, 1586	24455	.....	−0·026	+0·86	.....	.....
1186	BD + 62°, 1587	24458	.....	−0·045	+0·29	.....	.....
1187	BD + 52°, 2119	24489	.....	−0·019	+0·28	.....	.....
1188	δ U. Min	24236	N*h*	−0·199	+0·24	−0·052	+0·04
1189	Br. 2257	24500	.....	−0·011	+1·15	.....	.....
1190	67 Ophi	24509	677	−0·005	+0·36	+0·005	+0·26
1191	6 Sgtr	24517	1470	+0·005	+1·48	+0·016	+1·40
1192	Gr. 2500	24581	.....	−0·034	+0·41	.....	.....
1193	γ Sgtr	24632	679	−0·037	+0·93	−0·023	+0·68
1194	BD + 39°, 3310	24628	.....	−0·054	+0·53	.....	.....
1195	Pi 17h, 356	24678	.....	−0·002	+0·70	.....	.....
1196	Pi 17h, 359	24694	.....	+0·009	+1·35	.....	.....
1197	72 Ophi	24695	680	−0·022	+0·58	−0·012	+0·37
1198	BD + 15°, 3365	24699	.....	+0·000	+0·28	.....	.....
1199	BD − 2°, 4558	24726	.....	−0·012	+0·81	.....	.....
1200	B1. 2279	24720	.....	−0·021	−0·28	.....	.....
1201	Gr. 2518	24722	.....	+0·010	+0·40	.....	.....
1202	BD − 13°, 4863	24750	1472	+0·001	+0·57	+0·010	+0·37
1203	Br. 2321	24669	.....	−0·038	+0·16	.....	.....
1204	BD + 6°, 3639	24759	.....	+0·001	+0·69	.....	.....
1205	μ Sgtr	24856	682	−0·018	+0·24	−0·014	+0·17
1206	BD − 17°, 5112	24946	.....	−0·034	+0·53	.....	.....
1207	BD + 30°, 3162	24933	.....	−0·032	+0·31	.....	.....
1208	Br. 2292	24952	1475	−0·003	+1·10	+0·005	+0·95
1209	BD + 13°, 3593	24977	.....	−0·028	+0·48	.....	.....
1210	Br. 2300	25003	.....	−0·029	+0·88	.....	.....
1211	δ Sgtr	25024	687	−0·014	+0·61	−0·009	+0·37
1212	Br. 2299	25036	1476	+0·003	+0·26	+0·016	+0·08
1213	η Serp	25046	688	+0·003	+0·53	+0·008	+0·37
1214	109 Herc	25116	690	−0·008	+0·36	−0·009	+0·00
1215	Br. 2303	25132	.....	−0·002	+0·45	.....	.....
1216	BD + 7°, 3682	25153	1478	−0·022	+0·42	−0·003	+0·31
1217	BD + 29°, 3259	25165	1479	−0·004	+0·69	+0·016	+0·57
1218	λ Sgtr	25180	692	+0·028	+1·53	+0·030	+1·30
1219	CD − 26°, 13192	25184	.....	−0·049	+1·16	.....	.....
1220	γ Scut	25220	696	+0·005	+0·70	+0·001	+0·62
1221	BD − 10°, 4713	25282	.....	+0·022	+0·84	.....	.....
1222	BD + 16°, 3529	25284	1481	−0·017	+0·48	−0·010	+0·27

Cat No	STAR	G. C No	FK3 No.	O – G C Δα	O – G C Δδ	O – FK3 Δα	O – FK3 Δδ
				s	"	s	"
1223	Gr. 2589	25301	.....	−0·063	+0·38	.....	.....
1224	Gr. 2596	25352	.....	−0·054	−0·05	.....	.....
1225	Gr. 2601	25343	.....	−0·042	+0·36	.....	.....
1226	BD + 20°, 3847	25371	.....	+0·006	+0·35	.....	.....
1227	α Scut.	25385	1482	−0·005	+0·72	+0·002	+0·56
1228	BD + 10°, 3573	25381	.....	−0·022	+0·76	.....	.....
1229	Br. 2340	25362	.....	−0·025	+0·41	.....	.....
1230	Gr. 2603	25379	1483	−0·046	+0·04	−0·043	−0·10
1231	BD + 67°, 1079	25383	.....	−0·087	+0·26	.....	.....
1232	BD + 0°, 3975	25437	.....	+0·001	+0·67	.....	.....
1233	Pi 18h, 128	25452	.....	+0·007	+0·58	.....	.....
1234	Br. 2412	25334	Nμ	−0·054	+0·24	+0·069	+0·13
1235	α Lyra	25466	699	−0·023	+0·51	−0·013	+0·44
1236	Pi 18h, 174	25519	.....	−0·112	+0·25	.....	.....
1237	δ Scut.	25580	1486	+0·003	+0·72	+0·006	+0·54
1238	BD + 31°, 3332	25583	.....	−0·032	+0·14	.....	.....
1239	Pi 18h, 155	25636	.....	−0·011	+0·97	.....	.....
1240	φ Sgtr.	25661	1487	−0·046	+0·53	−0·040	+0·37
1241	Br. 2345	25687	.....	−0·030	+0·30	.....	.....
1242	β Scut.	25730	1489	+0·009	+0·33	+0·013	+0·17
1243	BD + 18°, 3817	25729	.....	−0·023	+0·41	.....	.....
1244	BD − 13°, 5119	25827	.....	+0·008	+0·32	.....	.....
1245	BD + 7°, 3862	25840	.....	+0·031	−0·09	.....	.....
1246	BD + 26°, 3368	25838	.....	−0·027	+0·05	.....	.....
1247	7 Aqil.	25855	.....	+0·021	+0·09	.....	.....
1248	β Lyra	25847	705	−0·028	+0·16	−0·014	−0·09
1249	Br. 2362	25862	.....	+0·001	+0·24	.....	.....
1250	CD − 29°, 15449	25880	.....	+0·019	+1·47	.....	.....
1251	Br. 2371	25895	.....	−0·013	+0·41	.....	.....
1252	σ Sgtr.	25941	706	−0·007	+2·02	−0·009	+1·89
1253	δ^1 Lyra	25934	.....	−0·034	+0·29	.....	.....
1254	BD − 16°, 5078	25955	1495	−0·009	+0·70	+0·001	+0·64
1255	θ Serp.	25991	709	−0·003	+0·29	−0·001	−0·07
1256	λ U. Min.	25111	Ni	−0·164	+0·17	+0·258	+0·17
1257	Br. 2375	26013	.....	−0·008	+0·17	.....	.....
1258	Br. 2379	26020	.....	−0·034	+0·25	.....	.....
1259	Br. 2385	26064	.....	+0·020	+0·64	.....	.....
1260	γ Lyra	26086	713	−0·037	+0·35	−0·032	+0·22
1261	ε Aqil.	26091	712	+0·000	+0·16	+0·000	+0·06
1262	Gr. 2727	26087	.....	−0·011	+0·26	.....	.....
1263	ζ Sgtr.	26161	715	−0·019	+1·62	−0·014	+1·49
1264	BD + 19°, 3888	26198	.....	−0·008	+0·38	.....	.....
1265	CD − 23°, 15008	26210	.....	−0·009	−0·13	.....	.....
1266	ζ Aqil.	26270	716	+0·014	+0·53	+0·022	+0·26
1267	BD + 82°, 572	26155	.....	−0·006	+0·34	.....	.....
1268	λ Aqil.	26285	717	+0·002	+0·04	+0·002	−0·10
1269	Gr. 2759	26268	.....	−0·063	−0·12	.....	.....
1270	BD − 1°, 3649	26300	1497	+0·020	+0·38	+0·019	+0·15
1271	Pi 18h, 318	26317	1498	−0·038	+0·45	−0·036	+0·30
1272	π Sgtr.	26386	720	+0·020	+0·63	+0·017	+0·56

Cat. No.	STAR	G. C. No.	FK3 No	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
1273	Br. 2410	26379	.....	−0·001	+0·41	.....	.....
1274	BD − 12°, 5311	26469	.....	+0·005	+0·01	.....	.....
1275	Br. 2433	26475	.....	−0·035	+0·58	.....	.....
1276	ψ Sgtr.	26516	.....	−0·060	+0·45	.....	.....
1277	Br. 2425	26542	.....	−0·061	−0·14	.....	.....
1278	δ Drac.	26520	723	−0·051	−0·10	−0·018	−0·30
1279	43 Sgtr.	26589	722	−0·016	+0·38	−0·018	+0·22
1280	ω Aqil.	26609	725	−0·002	+0·24	+0·008	−0·03
1281	κ Cygn.	26621	726	−0·040	+0·82	−0·029	+0·69
1282	BD + 37°, 3413	26650	.....	−0·045	+0·37	.....	.....
1283	Br. 2435	26669	.....	−0·008	+0·19	.....	.....
1284	π Drac.	26735	.....	−0·073	+0·57	.....	.....
1285	BD − 14°, 5428	26805	.....	−0·044	+0·51	.....	.....
1286	Br. 2456	26785	.....	−0·044	+0·36	.....	.....
1287	δ Aqil.	26816	730	−0·005	+0·55	+0·005	+0·32
1288	Br. 2448	26823	.....	+0·020	+0·55	.....	.....
1289	Br. 2462	26844	1505	+0·005	+0·47	+0·019	+0·33
1290	Gr. 2844	26847	1506	−0·014	+0·22	−0·001	+0·10
1291	BD + 76°, 734	26826	.....	+0·064	+0·26	.....	.....
1292	BD + 83°, 552	26773	.....	+0·005	+0·14	.....	.....
1293	Pi 19h, 126	26911	.....	−0·029	+0·38	.....	.....
1294	BD − 0°, 3760	26907	.....	+0·002	+0·37	.....	.....
1295	BD + 62°, 1716	26888	.....	−0·005	+0·21	.....	.....
1296	BD + 33°, 3480	26946	.....	−0·018	+0·52	.....	.....
1297	β^1 Cygn.	26953	732	−0·021	+0·30	−0·019	+0·15
1298	ι Cygn.	26947	733	−0·039	+0·22	−0·031	+0·02
1299	BD + 5°, 4177	26965	.....	+0·008	+0·46	.....	.....
1300	BD + 70°, 1073	27023	.....	−0·113	−0·02	.....	.....
1301	52 Sgtr.	27089	736	−0·016	+0·72	−0·014	+0·58
1302	Gr. 2880	27078	.....	−0·070	+0·28	.....	.....
1303	Pi 19h, 180	27105	.....	+0·013	+0·87	.....	.....
1304	κ Aqil.	27107	737	−0·002	+0·54	−0·005	+0·41
1305	BD + 21°, 3849	27134	.....	−0·027	+0·31	.....	.....
1306	θ Cygn.	27141	738	+0·011	+0·74	+0·005	+0·59
1307	BD + 3°, 4097	27176	.....	+0·046	+0·31	.....	.....
1308	Gr. 2907	27206	.....	−0·041	+0·00	.....	.....
1309	Br. 2500	27263	.....	+0·011	−0·02	.....	.....
1310	δ Cygn.	27347	.....	+0·010	+0·22	−0·029	+0·01
1311	γ Aqil.	27354	741	−0·001	+0·72	−0·002	+0·49
1312	δ Sgte.	27391	743	−0·021	+0·03	−0·012	−0·12
1313	CD − 29°, 16546	27412	.....	+0·005	+1·44	.....	.....
1314	BD + 25°, 3972	27402	.....	−0·019	+0·18	.....	.....
1315	BD + 7°, 4252	27548	.....	+0·000	+0·32	.....	.....
1316	α Aqil.	27470	745	+0·005	+0·68	+0·006	+0·42
1317	BD − 3°, 4742	27532	1519	+0·033	+0·50	+0·018	+0·34
1318	CD − 24°, 15668	27542	.....	+0·010	+1·36	.....	.....
1319	Br. 2531	27562	.....	−0·003	+0·36	.....	.....
1320	BD + 34°, 3778	27561	.....	−0·053	+0·39	.....	.....
1321	Gr. 2964	27564	.....	−0·031	+0·40	.....	.....
1322	β Aqil.	27587	749	+0·002	+0·53	+0·002	+0·27

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
1323	Pi 19h, 371	27635	.....	−0·036	+0·53	.....	.....
1324	γ Sgte.	27672	752	−0·005	+0·23	+0·001	+0·04
1325	BD + 0°, 4375	27681	.....	+0·044	+0·34	.....	.....
1326	BD + 10°, 4126	27680	.....	−0·027	−0·15	.....	.....
1327	Br. 2553	27688	.....	−0·016	+0·52	.....	.....
1328	62 Sgtr.	27763	753	−0·018	+0·92	−0·012	+0·78
1329	BD + 29°, 3872	27820	.....	−0·022	+0·30	.....	.....
1330	Pi 19h, 377	27840	.....	−0·016	+1·30	.....	.....
1331	CD − 27°, 14515	27842	.....	+0·020	+0·99	.....	.....
1332	η Sgte.	27868	.....	+0·009	+0·05	.....	.....
1333	BD + 47°, 3004	27869	.....	+0·009	+0·58	.....	.....
1334	BD − 4°, 5013	27880	.....	+0·024	+0·12	.....	.....
1335	Br. 2573	27904	.....	−0·034	+0·78	.....	.....
1336	BD + 8°, 4344	27929	.....	−0·001	+0·12	.....	.....
1337	Br. 2586	27911	.....	−0·048	−0·02	.....	.....
1338	θ Aqil.	28010	756	+0·007	+0·37	+0·006	+0·25
1339	Br. 2577	28035	.....	+0·006	+0·36	.....	.....
1340	Gr. 3087	28077	.....	−0·040	+0·74	.....	.....
1341	Gr. 3212	27964	Nν	−0·034	−0·17	+0·062	−0·31
1342	Gr. 3112	28070	.....	−0·087	+0·26	.....	.....
1343	BD + 4°, 4395	28148	.....	+0·007	+0·20	.....	.....
1344	α^1 Capr.	28189	.....	−0·014	+0·59	.....	.....
1345	α^2 Capr.	28200	761	−0·001	+0·95	−0·004	+0·87
1346	σ Capr.	28233	.....	−0·025	+0·68	.....	.....
1347	Br. 2616	28242	.....	−0·067	+0·30	.....	.....
1348	BD − 6°, 5451	28278	.....	+0·004	+0·98	.....	.....
1349	β Capr.	28295	762	+0·010	+0·75	+0·009	+0·69
1350	BD + 14°, 4263	28288	.....	+0·021	+0·19	.....	.....
1352	γ Cygn.	28338	765	−0·034	+0·61	−0·033	+0·50
1353	Gr. 3157	28364	.....	−0·014	−0·11	.....	.....
1354	CD − 29°, 17049	28394	1532	−0·028	+1·87	−0·019	+1·45
1355	BD + 16°, 4259	28435	.....	+0·001	+0·78	.....	.....
1356	π Capr.	28442	.....	+0·021	+0·99	.....	.....
1357	CD − 26°, 15036	28451	.....	+0·069	+0·69	.....	.....
1358	BD + 7°, 4477	28466	.....	+0·000	+0·08	.....	.....
1359	Gr. 3191	28456	.....	+0·008	+0·21	.....	.....
1360	Pi 20h, 146	28496	.....	+0·019	+1·40	.....	.....
1361	Pi 20h, 174	28563	1536	+0·005	+0·83	+0·008	+0·71
1362	BD + 48°, 3148	28556	.....	−0·086	−0·19	.....	.....
1363	Br. 2647	28569	.....	−0·055	+0·06	.....	.....
1364	ε Dlph.	28593	768	−0·003	+0·41	−0·004	+0·23
1365	BD + 4°, 4486	28614	1537	+0·019	+0·74	+0·012	+0·61
1366	β Dlph.	28709	771	+0·008	+0·25	+0·006	+0·12
1367	BD + 12°, 4418	28732	.....	+0·008	−0·21	.....	.....
1368	BD − 5°, 5335	28747	.....	+0·064	+0·17	.....	.....
1369	θ Dlph.	28743	.....	+0·030	+0·39	.....	.....
1370	Br. 2668	28741	.....	−0·010	+0·22	.....	.....
1371	α Dlph.	28780	774	−0·009	+0·32	−0·009	+0·17
1372	BD + 83°, 588	28690	.....	+0·094	+0·10	.....	.....
1373	Br. 2675	28827	.....	+0·002	+0·07	.....	.....

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
1374	α Cygn.	28846	777	−0·054	+0·67	−0·065	+0·57
1375	BD + 78°, 716	28803	.....	+0·018	+0·23	.....	.....
1376	BD + 19°, 4501	28917	.....	−0·024	+0·60	.....	.....
1377	ψ Capr.	28929	779	−0·009	+1·40	−0·017	+1·23
1378	ε Cygn.	28959	780	−0·065	−0·27	−0·054	−0·52
1379	ε Aqar.	28978	781	+0·016	+0·64	+0·008	+0·50
1380	Br. 2688	28986	.....	−0·007	+0·55	.....	.....
1381	Gr. 3285	28975	1544	−0·028	+0·33	−0·012	+0·18
1382	BD + 27°, 3868	29001	.....	−0·006	+0·35	.....	.....
1383	Pi 20h, 305	29018	.....	−0·002	+1·14	.....	.....
1384	BD − 1°, 4057	29025	1545	+0·034	+1·07	+0·026	+0·96
1385	Pi 20h, 325	29057	.....	+0·031	+0·49	.....	.....
1386	BD − 21°, 5844	29060	.....	−0·027	+1·13	.....	.....
1387	Br. 2702	29066	.....	−0·052	−0·31	.....	.....
1388	BD + 63°, 1663	29069	.....	−0·050	−0·04	.....	.....
1389	76 Drac.	29019	N*k*	−0·083	+0·09	+0·012	−0·02
1390	BD + 36°, 4314	29190	.....	−0·054	+0·15	.....	.....
1391	Br. 2708	29201	.....	−0·002	−0·06	.....	.....
1392	Pi 20h, 386	29245	1548	+0·019	+0·44	+0·016	+0·44
1393	BD + 3°, 4466	29252	.....	+0·031	+0·74	.....	.....
1394	ν Cygn.	29251	788	−0·017	+0·52	−0·020	+0·25
1395	Br. 2719	29267	1549	−0·001	+0·31	−0·008	+0·27
1396	Br. 2735	29354	.....	−0·050	+0·12	.....	.....
1397	Gr. 3375	29386	.....	+0·028	+0·07	.....	.....
1398	BD + 67°, 1283	29401	.....	−0·044	+0·01	.....	.....
1399	BD − 0°, 4161	29480	1553	+0·017	+0·32	+0·005	−0·04
1400	BD + 26°, 4073	29491	.....	+0·013	+0·58	.....	.....
1401	BD + 30°, 4318	29502	.....	+0·012	−0·02	.....	.....
1402	BD + 15°, 4340	29530	.....	−0·006	+0·06	.....	.....
1403	χ Capr.	29543	.....	+0·009	+0·93	.....	.....
1404	CD − 28°, 17136	29546	.....	−0·025	+2·42	.....	.....
1405	BD + 6°, 4754	29548	.....	+0·027	+0·23	.....	.....
1406	ν Aqar.	29571	794	−0·008	+0·82	−0·010	+0·75
1407	ζ Cygn.	29661	797	+0·015	+0·65	+0·019	+0·52
1408	BD − 6°, 5720	29714	.....	+0·021	+0·14	.....	.....
1409	α Equl.	29735	800	+0·016	+0·28	+0·010	+0·10
1410	BD + 24°, 4357	29744	.....	−0·029	−0·16	.....	.....
1411	Br. 2765	29781	.....	+0·004	−0·11	.....	.....
1412	Gr. 3548	29620	.....	−0·292	−0·12	.....	.....
1413	BD + 10°, 4516	29821	.....	+0·004	+0·41	.....	.....
1414	Br. 2775	29823	.....	−0·033	+0·02	.....	.....
1415	BD + 37°, 4271	29847	.....	−0·054	+0·59	.....	.....
1416	α Ceph.	29848	803	−0·045	+0·73	−0·029	+0·66
1417	Gr. 3434	29868	1560	−0·053	+0·70	−0·046	+0·53
1418	BD + 3°, 4551	29904	.....	+0·035	+0·28	.....	.....
1419	1 Pegs.	29914	804	−0·007	+0·28	−0·009	+0·21
1420	Br. 2781	29957	1562	−0·043	+0·38	−0·053	+0·39
1421	Br. 2784	29993	.....	+0·009	+0·62	.....	.....
1422	BD + 18°, 4794	30023	.....	+0·008	+0·74	.....	.....
1423	BD + 7°, 4696	30060	1564	+0·031	−0·03	+0·018	−0·05

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				s	″	s	″
1424	Pi 21h, 145	30095	.....	+0·007	+0·94	.....	.....
1425	BD + 34°, 4436	30117	.....	−0·014	+0·14	.....	.....
1426	β Aqar	30137	808	+0·063	+0·42	+0·055	+0·29
1427	β Ceph	30118	809	−0·089	+0·22	−0·074	+0·04
1428	Pi 21h, 161	30153	.....	−0·009	−0·75	.....	.....
1429	BD + 22°, 4431	30211	.....	−0·022	+0·23	.....	.....
1430	BD + 11°, 4613	30259	.....	+0·034	+0·44	.....	.....
1431	BD + 49°, 3562	30253	.....	+0·042	+0·44	.....	.....
1432	ξ Aqar	30268	1569	+0·014	+0·57	+0·006	+0·46
1433	Br. 2830	30302	.....	−0·061	+0·53	.....	.....
1434	γ Capr	30320	812	+0·025	+0·17	+0·015	+0·11
1435	Gr. 3550	30363	.....	−0·008	+0·56	.....	.....
1436	Br. 2822	30377	.....	+0·008	+0·26	.....	.....
1437	BD + 45°, 3637	30390	.....	−0·045	+0·20	.....	.....
1438	BD + 6°, 4889	30414	.....	+0·003	−0·04	.....	.....
1439	ε Pegs	30431	815	+0·017	+0·49	+0·014	+0·33
1440	BD + 35°, 4626	30475	1571	−0·006	+0·51	+0·000	+0·34
1441	BD − 2°, 5631	30482	.....	+0·023	−0·11	.....	.....
1442	δ Capr	30491	819	+0·005	+0·69	−0·001	+0·64
1443	Br. 2853	30502	.....	+0·026	−0·23	.....	.....
1444	CD − 27°, 15639	30552	.....	−0·026	+1·32	.....	.....
1445	BD + 40°, 4648	30566	.....	−0·021	+0·25	.....	.....
1446	BD − 23°, 17135	30585	1576	+0·014	+0·93	−0·001	+0·91
1447	μ Capr	30631	1577	+0·007	+0·62	+0·001	+0·48
1448	Gr. 3600	30634	.....	+0·017	+0·61	.....	.....
1449	BD + 31°, 4577	30677	.....	−0·008	+0·02	.....	.....
1450	BD + 20°, 5046	30710	1579	+0·006	−0·01	+0·002	−0·08
1451	Br. 2894	30681	.....	−0·020	−0·22	.....	.....
1452	Br. 2869	30719	.....	+0·029	+0·34	.....	.....
1453	BD + 3°, 4644	30747	.....	+0·032	+1·16	.....	.....
1454	BD − 5°, 5674	30755	1580	+0·007	−0·14	+0·004	−0·24
1455	Gr. 3637	30745	.....	−0·079	−0·04	.....	.....
1456	Pi 21h, 361	30816	.....	−0·006	+0·55	.....	.....
1457	BD + 9°, 4975	30868	.....	+0·018	+0·67	.....	.....
1458	Br. 2887	30872	.....	+0·016	+0·84	.....	.....
1459	α Aqar	30896	827	+0·018	+0·39	+0·011	+0·28
1460	Br. 2895	30899	.....	−0·026	−0·11	.....	.....
1461	Pi 21h, 393	30927	.....	−0·004	+0·77	.....	.....
1462	BD + 17°, 4693	30945	.....	−0·004	+0·56	.....	.....
1463	BD + 45°, 3813	30985	.....	−0·070	+0·50	.....	.....
1464	θ Pegs	31013	834	+0·020	+0·34	+0·020	+0·02
1465	Br. 2909	31021	.....	−0·018	+0·98	.....	.....
1466	ζ Ceph	31044	836	−0·022	+0·53	−0·016	+0·41
1467	CD − 26°, 16033	31075	.....	−0·022	+0·83	.....	.....
1468	BD − 16°, 6046	31109	1582	−0·024	+0·76	+0·002	+0·64
1469	BD + 3°, 4687	31117	.....	+0·010	+0·19	.....	.....
1470	BD + 21°, 4719	31120	.....	+0·001	−0·01	.....	.....
1471	Gr. 3725	31127	.....	−0·051	+0·04	.....	.....
1472	θ Aqar	31152	840	+0·021	+0·29	+0·011	+0·27
1473	Br. 2931	31163	.....	+0·040	+0·31	.....	.....

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	″	s	″
1474	BD + 12°, 4797	31171	.....	+0·002	−0·04	.....	.....
1475	Pi 22h, 65	31210	.....	+0·001	+0·38	.....	.....
1476	Br. 2947	31205	.....	−0·064	+0·68	.....	.....
1477	Gr. 3746	31235	.....	+0·023	+0·39	.....	.....
1478	BD + 30°, 4685	31244	.....	+0·007	+0·36	.....	.....
1479	γ Aqar	31257	842	+0·023	+0·57	+0·011	+0·46
1480	32 H. Ceph	31223	Nξ	−0·228	−0·06	−0·173	−0·05
1481	β Lacr	31310	844	+0·013	+0·57	+0·015	+0·50
1482	Pi 22h, 91	31343	.....	+0·042	+0·93	.....	.....
1483	Gr. 3767	31333	.....	−0·027	+0·36	.....	.....
1484	BD + 17°, 4746	31338	1586	+0·021	+0·32	+0·014	+0·11
1485	Br. 2962	31408	1588	+0·014	+0·62	+0·006	+0·46
1486	CD − 27°, 15932	31417	.....	−0·046	+0·47	.....	.....
1487	Pi 22h, 120	31415	1589	+0·006	−0·15	+0·004	−0·23
1488	σ Aqar	31440	1591	+0·009	+0·45	−0·001	+0·34
1489	BD − 3°, 5460	31462	.....	+0·060	+0·40	.....	.....
1490	Br. 2967	31468	.....	+0·034	+0·77	.....	.....
1491	Gr. 3804	31488	.....	−0·043	−0·04	.....	.....
1492	η Aqar	31534	850	+0·003	+0·62	−0·005	+0·43
1493	Br. 2978	31540	.....	+0·010	+0·81	.....	.....
1494	Gr. 3829	31556	.....	−0·040	+0·52	.....	.....
1495	BD + 23°, 4576	31582	.....	−0·026	+0·30	.....	.....
1496	BD − 8°, 5912	31593	.....	+0·025	+0·23	.....	.....
1497	Pi 22h, 186	31655	.....	+0·017	+0·76	.....	.....
1498	ζ Pegs	31664	855	+0·008	+0·37	+0·003	+0·26
1499	BD + 30°, 4771	31668	.....	−0·022	+1·11	.....	.....
1500	BD + 4°, 4896	31692	.....	+0·043	+1·02	.....	.....
1501	η Pegs	31706	857	−0·037	+0·53	−0·040	+0·41
1502	Br. 3006	31753	1596	+0·016	+0·10	+0·018	−0·08
1503	BD + 6°, 5060	31772	.....	+0·048	+0·24	.....	.....
1504	λ Pegs	31776	859	+0·003	+0·30	+0·002	+0·19
1505	Br. 3007	31794	1597	−0·012	+0·69	−0·021	+0·69
1506	BD − 2°, 5826	31796	1598	+0·054	−0·06	+0·037	−0·30
1507	Br. 3009	31802	.....	−0·001	+0·68	.....	.....
1508	CD − 26°, 16324	31806	.....	+0·018	+1·96	.....	.....
1509	ι Ceph	31857	863	−0·005	+0·06	+0·010	−0·01
1510	34 H. Ceph	31855	.....	+0·097	+0·20	.....	.....
1511	BD + 25°, 4828	31876	.....	−0·015	+0·33	.....	.....
1512	λ Aqar	31903	864	+0·011	+0·21	+0·000	+0·19
1513	BD + 67°, 1475	31921	.....	−0·049	−0·04	.....	.....
1514	δ Aqar	31943	866	+0·025	+0·49	+0·014	+0·47
1515	Br. 3026	31944	.....	+0·010	+0·90	.....	.....
1516	BD + 36°, 4956	31964	1600	−0·031	+0·28	−0·027	+0·06
1517	BD + 55°, 2850	31986	.....	+0·037	−0·35	.....	.....
1518	BD + 11°, 4904	31991	.....	+0·024	+0·38	.....	.....
1519	α Pisc. A	32000	867	−0·014	+0·63	−0·024	+0·52
1520	BD + 3°, 4799	32002	.....	+0·038	−0·05	.....	.....
1521	Br. 3035	32003	.....	+0·019	+0·13	.....	.....
1522	36 H. Ceph	31999	No	+0·099	+0·25	−0·010	+0·19
1523	Gr. 3940	32039	.....	+0·014	+0·52	.....	.....

Cat. No.	STAR	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
				s	"	s	"
1524	Br. 3039	32065	.....	+0·021	+0·07	.....	.....
1525	Br. 3040	32079	.....	+0·006	+0·23	.....	.....
1526	o Andr.	32095	869	−0·015	+0·60	−0·018	+0·36
1528	BD − 21°, 6354	32105	.....	+0·062	+0·60	.....	.....
1529	Gr. 3968	32119	.....	−0·095	−0·18	.....	.....
1530	β Pegs.	32135	870	−0·019	+0·29	−0·022	+0·10
1531	α Pegs.	32149	871	−0·003	−0·04	−0·008	−0·19
1532	BD + 34°, 4847	32202	.....	−0·016	+0·50	.....	.....
1533	BD + 19°, 5060	32207	.....	+0·000	+0·08	.....	.....
1534	BD + 29°, 4862	32215	.....	+0·027	−0·09	.....	.....
1535	Br. 3063	32216	.....	−0·014	+0·21	.....	.....
1536	CD − 28°, 18099	32256	.....	−0·031	+0·05	.....	.....
1537	Br. 3068	32252	.....	+0·008	−0·21	.....	.....
1538	Br. 3070	32288	.....	−0·015	+0·15	.....	.....
1539	φ Aqar.	32346	1607	+0·037	+0·27	+0·026	+0·16
1540	BD − 11°, 6032	32354	.....	−0·017	+0·04	.....	.....
1541	BD + 24°, 4737	32368	.....	+0·022	+0·27	.....	.....
1542	BD − 4°, 5852	32369	.....	+0·010	−0·10	.....	.....
1543	γ Pisc.	32415	878	+0·023	+0·33	+0·013	+0·19
1544	CD − 29°, 18654	32460	.....	+0·024	+0·65	.....	.....
1545	BD − 18°, 6283	32467	.....	−0·001	+0·10	.....	.....
1546	Br. 3092	32491	.....	+0·041	+0·32	.....	.....
1547	Br. 3099	32510	1610	−0·003	+0·27	−0·009	+0·27
1548	Br. 3110	32538	.....	−0·035	+0·06	.....	.....
1549	Br. 3108	32543	.....	+0·030	+0·21	.....	.....
1550	Br. 3113	32594	.....	+0·027	+0·89	.....	.....
1551	κ Pisc.	32620	884	+0·016	+0·21	+0·013	+0·05
1552	BD − 12°, 6496	32648	.....	+0·034	+1·12	.....	.....
1553	CD − 26°, 16654	32654	.....	−0·065	+1·21	.....	.....
1554	BD + 15°, 4830	32665	1615	+0·006	+0·34	−0·009	+0·16
1555	Br. 3124	32672	.....	−0·001	+0·76	.....	.....
1556	39 H. Ceph.	32680	.....	−0·152	+0·00	.....	.....
1557	BD + 27°, 4566	32710	.....	−0·021	+0·75	.....	.....
1558	BD + 6°, 5168	32732	.....	+0·015	+0·67	.....	.....
1559	Gr. 4089	32733	.....	−0·003	−0·08	.....	.....
1560	Gr. 4087	32743	.....	+0·011	+0·25	.....	.....
1561	Br. 3132	32759	.....	−0·012	+0·23	.....	.....
1563	Gr. 4099	32796	.....	−0·038	+0·39	.....	.....
1564	Br. 3139	32818	.....	+0·016	+0·24	.....	.....
1565	Gr. 4105	32831	.....	−0·007	+0·26	.....	.....
1566	Pi 23h, 137	32843	.....	+0·004	+0·21	.....	.....
1567	Br. 3146	32864	.....	−0·028	−0·16	.....	.....
1568	Gr. 4120	32872	.....	−0·056	+0·40	.....	.....
1569	ι Pisc.	32879	892	+0·021	+0·30	+0·019	+0·20
1570	γ Ceph.	32875	893	−0·032	−0·34	+0·041	−0·44
1571	BD + 35°, 5074	32892	.....	−0·027	+0·55	.....	.....
1572	BD − 8°, 6166	32893	.....	+0·036	+0·23	.....	.....
1573	Br. 3165	33029	1623	+0·017	+0·07	+0·011	−0·01
1574	δ Sclp.	33050	896	−0·003	+0·66	−0·015	+0·56
1575	CD − 28°, 18361	33055	.....	+0·003	+0·33	.....	.....

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				s	″	s	″
1576	Pi 23h, 194	33058	1624	−0·010	+1·32	−0·016	+1·19
1577	BD + 63°, 2064	33089	.....	−0·084	+0·53	.....	.....
1578	Br. 3173	33094	.....	+0·036	+0·56	.....	.....
1579	Br. 3174	33112	.....	+0·010	+0·00	.....	.....
1580	φ Pegs	33119	898	−0·008	+0·36	−0·010	+0·23
1581	BD + 21°, 4999	33208	1628	+0·007	−0·25	+0·002	−0·38
1582	V Ceph	33205	Nπ	+0·053	+0·34	+0·117	+0·20
1583	Br. 3188	33242	.....	−0·037	+0·88	.....	.....
1584	BD + 34°, 5039	33243	.....	−0·006	+0·22	.....	.....
1585	σ Cass	33257	.....	+0·002	+0·60	.....	.....
1586	ω Pisc	33262	902	+0·018	+0·18	+0·013	+0·08
1587	Pi 23h, 249	33273	.....	+0·027	+0·35	.....	.....
1588	Br. 3201	33341	.....	+0·016	+0·40	.....	.....
1589	2 Ceti	23	905	+0·020	+0·22	+0·015	+0·11

CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

VOL. XV No. 3

Results of Observations made with the Reversible Meridian Circle 1935-1950

Catalogue of 1525 Stars

Corrections to G.C. and FK3

BY

W. S. McClenahan, E. G. Woolsey and R. W. Tanner

EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1954

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ABSTRACT

This catalogue contains the results of observations made at Ottawa with the Reversible Meridian Circle during the period May 1935 to June 1950 inclusive. The program consists of 1525 stars selected from the Backlund-Hough list, given in the supplement to the Connaissance des Temps of 1914; the right ascensions are based on the Third Fundamental Catalogue (FK3) of the Berliner Jahrbuch as defined by 180 selected clock stars, and declinations in a fundamental system based only on polars at upper and lower culmination. Corrections for Variation in Latitude were computed from values given by the International Latitude Service and refraction is based on Bessel's Tabulæ Regiomontanæ. Screens were used to reduce star magnitudes, and a reversing prism was used with the eye-piece throughout the work. The observing clock was the slave of a Shortt Free Pendulum, and transits were recorded on a printing chronograph.

Comparisons with G.C. and FK3 are given for 3-hour intervals, as well as the observed corrections to G.C. and FK3 for each star at the epoch of observation.

INTRODUCTION

This part of the volume contains results of observations made at Ottawa during the period from May 1935 to June 1950, and was originally to have been included in the catalogue of 1589 stars, Publications of the Dominion Observatory, Volume XV, No. 2, but owing to retirements and assignments of observers to other duties this half of the computations was not completed in the same manner as the first.

A description of the Meridian Circle is referred to in the introduction to Volume XV, No. 1. For this program the object glass and eye end were interchanged from the position used in the two previous catalogues, Volume XV, No. 1 and No. 2. The instrument has a travelling wire micrometer, 4 microscopes were used to read circle divisions and a reversing prism was used on all observations. The same screens were used to reduce magnitudes of all stars to the sixth magnitude. Transits were recorded on a printing chronograph with the slave of a Shortt Free Pendulum being used as the observing clock.

Up to the time of the first issue of "Apparent Places of Fundamental Stars", 1941, containing the 1535 stars in the Third Fundamental Catalogue (FK3), the right ascensions were based on Eichelberger positions of the 180 clock stars and the Ottawa positions of the pole stars using proper motions as given by Eichelberger. The new FK3 Catalogue did not contain all the 180 clock stars nor all the 21 circumpolar stars. Six clock stars and 10 azimuth stars were replaced. Since that time the right ascensions have been based on the FK3 positions of the clock stars and circumpolars.

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The work was carried out under the supervision of C. C. Smith until his retirement in December 1937; under D. B. Nugent until his retirement in January 1945; and finally under W. S. McClenahan. The following is a list of the observers who took part in this program;

C. C. Smith.....from May 1935 to October 1936.
W. S. McClenahan.....from May 1935 to December 1937.
R. J. McDiarmid.....from May 1935 to August 1945.
A. H. Swinburn.....from May 1935 to October 1947.
E. G. Woolsey.....from January 1946 to June 1950.
R. W. Tanner.....from June 1948 to June 1950.
R. A. Jenkins.....from May 1949 to June 1950.

E. C. Arbogast took a major part in the declination computations, and besides the observers Miss K. C. Nevins and D. B. Nugent took part in the computing.

The observations were carried out in the same manner as that described in the first part of this program except that observations of the sun and planets were discontinued in 1937. It was felt that these observations were insufficient in number to justify their inclusion so they have been omitted.

Methods for the determination of constants in this program are the same as that described in the previous catalogues, Publications of the Dominion Observatory, Volume XV, No. 1 and No. 2.

A complete check was carried out as the computing of the observations progressed, and in order to avoid serious errors the results, reduced to 1950 epoch, were then tabulated for each star. This enabled a further check to be made and large differences were re-examined. Any observation that differed from the mean position determined for that star by more than $0^s.1$ sec δ in right ascension or by 2″ of arc in declination has been discarded.

An examination of the residuals of the first star in each half hour of right ascension taken in two bands of declination, −5° to +5°, and +40° to +50°, gave the following probable errors:—

−5° to +5°	R.A. $\pm^s.022$ or ± 0″.33;	Dec. ± 0″.46
40° to 50°	R.A. $\pm^s.028$ or ± 0″.29;	Dec. ± 0″.38

The writers wish to thank Professor Gino Cecchini of the International Latitude Service for his kindness in supplying the Variation in Latitude prior to publication.

Right Ascensions.

The apparent places of the clock and azimuth stars were computed from the "Apparent Places of Fundamental Stars" (FK3). Prior to 1941 the positions were calculated from the American Ephemeris, the Connaissance des Temps and other ephemerides. In order to have a uniform system, corrections were applied to each night's work from 1935 to 1941. By investigation it was found that no correction in azimuth was needed and the corrections applied were the mean differences between Eichelberger and the FK3 positions of the clock stars observed on any one night.

Observations of the right ascensions were retained:

(a) For clock stars, if at least 6 clock stars and 2 azimuth stars, 1 at upper and 1 at lower culmination, were distributed over a period of at least 3 hours.

(b) For azimuth stars if at least 6 clock stars and 4 azimuth stars, 2 at upper and 2 at lower culmination, or 2 azimuth stars, 1 at upper and 1 at lower culmination were observed and readings on both azimuth marks.

(c) For program stars, if at least 6 clock stars and 1 azimuth star were observed.

TABLE I—CLOCK STARS

Clock Star	BD Number	Mag.	Decl.	Right Ascension 1950 Ottawa Ledgers	0-FK3	Clock Star	BD Number	Mag.	Decl.	Right Ascension 1950 Ottawa Ledgers	0-FK3
	°		° ′	h m s	s		°		° ′	h m s	s
F 1	+14 14	2·87	+14 54	0 10 39·437	−0·010	F 49	− 4 1526	4·98	− 4 44	6 25 29·355	+ ·007
F 2	− 9 48	3·75	− 9 6	16 52·778	− ·005	F 50	+16 1223	1·93	+16 27	34 49·406	+ ·004
F 3	− 4 54	6·05	− 4 14	27 29·156	− ·009	F 51	+13 1396	3·40	+12 57	42 28·963	− ·002
F *3	− 4 62	5·24	− 3 52	32 40·380	—	F 52	−11 1681	4·25	−11 58	51 51·949	− ·008
F 4	+ 6 107	4·55	+ 7 19	46 5·105	− ·005	F 53	+20 1687	3·7-4·1	+20 39	7 1 8·595	− ·031
F 5	− 1 114	4·92	− 1 25	50 27·031	− ·011	F 54	−15 1625	4·07	−15 33	1 29·745	+ ·014
F 6	+ 7 153	4·45	+ 7 37	1 0 20·686	− ·013	F 55	− 0 1636	4·09	− 0 25	9 18·605	− ·015
F 7	−10 240	3·60	−10 27	6 4·418	− ·007	F 56	+16 1443	3·65	+16 38	15 13·216	+ ·022
F 8	+ 2 185	5·28	+ 3 21	15 13·010	·000	F 57	+ 8 1774	3·09	+ 8 23	24 26·345	− ·009
F 9	− 8 244	3·83	− 8 26	21 31·366	− ·001	F 58	+12 1567	4·85	+12 7	27 0·841	+ ·022
F 10	+14 231	3·72	+15 5	28 48·219	+ ·026	F 59	− 3 1979	5·17	− 4 0	34 47·504	+ ·017
F 11	+ 4 293	4·68	+ 5 14	38 49·574	+ ·021	F 60	+ 5 1739	0·48	+ 5 21	— ———	—
F 12	+ 8 273	4·50	+ 8 54	42 44·932	− ·039	F 61	+ 2 1808	5·11	+ 1 54	49 6·376	− ·015
F 13	−11 359	3·92	−10 35	48 59·454	+ ·008	F *61	−13 2267	5·34	−13 46	— ———	—
F 14	+ 2 290	4·84	+ 2 56	50 57·832	− ·006	F 62	− 5 2339	6·30	− 6 12	59 58·548	− ·012
F 15	+20 306	2·72	+20 34	51 52·323	− ·016	F *62	+13 1831	5·11	+13 16	8 2 17·542	—
F 16	+ 8 345	4·54	+ 8 37	2 10 20·762	+ ·015	F 63	+ 9 1917	3·76	+ 9 20	13 48·298	+ ·026
F 17	+19 340	5·69	+19 40	15 20·327	+ ·002	F 64	− 3 2339	3·95	− 3 45	23 9·725	+ ·005
F 18	+ 7 388	4·34	+ 8 14	25 29·803	+ ·014	F 65	+ 6 2001	4·18	+ 5 53	35 0·588	− ·001
F 19	− 0 406	4·04	+ 0 7	36 54·999	+ ·014	F 66	+18 2027	4·17	+18 20	41 50·730	− ·010
F 20	+ 9 359	4·36	+ 9 54	42 14·107	+ ·008	F 67	+ 6 2060	3·30	+ 6 8	52 45·107	+ ·019
F 21	− 9 553	4·05	− 9 6	53 58·987	+ ·027	F 68	+12 1948	4·27	+12 3	55 45·234	− ·011
F 22	+ 3 419	2·82	+ 3 54	59 39·761	+ ·010	F 69	+11 1984	5·14	+10 52	9 5 2·428	+ ·023
F 23	+19 477	4·53	+19 32	3 8 45·897	+ ·013	F 70	+ 2 2167	3·84	+ 2 32	11 45·806	− ·014
F 24	+ 8 511	3·80	+ 8 51	22 7·140	+ ·015	F 71	− 8 2680	2·16	− 8 26	25 7·802	+ ·007
F 25	+12 486	4·28	+12 46	28 6·486	− ·026	F 72	− 0 2231	4·10	− 0 55	37 18·148	− ·004
F 26	− 9 697	3·81	− 9 38	30 34·388	+ ·030	F 73	+10 2044	3·76	+10 7	38 29·016	+ ·010
F 27	−10 728	3·72	− 9 56	40 51·025	− ·024	F 74	+ 8 2301	4·89	+ 8 17	57 34·346	+ ·015
F 28	−13 781	3·19	−13 39	55 41·635	− ·051	F 75	+17 2171	3·58	+17 0	10 4 36·547	+ ·025
F 29	+12 539	3·8-4·1	+12 21	57 54·405	+ ·021	F 76	+12 2149	1·34	+12 13	— ———	—
F 30	+ 5 581	3·94	+ 5 51	4 0 29·584	·000	F 77	+11 2820	3·83	−12 6	8 8·949	− ·006
F 31	− 7 764	4·14	− 6 58	9 25·338	− ·009	F 78	− 7 3001	5·40	− 7 49	15 8·683	+ ·023
F 32	+15 612	3·86	+15 31	16 56·670	+ ·013	F 79	−16 3052	4·06	−16 35	23 40·225	+ ·007
F 33	+17 712	3·93	+17 26	— ———	—	F 80	+10 2166	3·85	+ 9 34	30 10·773	+ ·010
F 34	+18 640	3·63	+19 4	25 41·610	+ ·022	F 81	+11 2283	5·27	+10 49	46 37·806	+ ·011
F 35	+16 629	1·06	+16 25	33 2·885	− ·019	F 82	+ 4 2407	5·05	+ 3 53	57 58·704	+ ·006
F 36	− 3 876	4·18	− 3 21	43 0·012	+ ·015	F 83	+ 8 2455	4·66	+ 7 36	11 2 26·294	·000
F 37	+ 2 810	3·87	+ 2 22	51 38·666	+ ·007	F 84	+16 2234	3·41	+15 42	11 37·073	+ ·011
F 38	− 5 1162	2·92	− 5 9	5 5 23·365	− ·010	F 85	−13 3345	3·82	−14 30	16 50·308	+ ·010
F 39	− 8 1063	0·34	− 8 15	12 7·992	− ·010	F 86	+ 6 2437	4·13	+ 6 18	18 33·491	+ ·004
F 40	− 7 1028	3·68	− 6 54	15 10·598	− ·009	F 87	− 0 2458	4·47	− 0 33	34 23·263	+ ·008
F 41	+ 6 919	1·70	+ 6 18	22 26·810	− ·028	F 88	+15 2383	2·23	+14 51	46 36·609	+ ·001
F 42	− 0 983	2·48	− 0 20	29 27·039	+ ·016	F 89	+ 2 2489	3·80	+ 2 3	48 5·379	− ·006
F 43	− 1 969	1·75	− 1 14	33 40·466	− ·014	F 90	+ 7 2502	4·57	+ 6 54	58 18·619	+ ·006
F 44	− 9 1235	2·20	− 9 41	— ———	—	F 91	+ 9 2583	4·24	+ 9 1	12 2 39·708	·000
F 45	+ 7 1055	0·1-1·2	+ 7 24	52 27·815	− ·007	F 92	+ 0 2926	4·00	− 0 23	17 20·734	− ·028
F 46	+14 1152	4·40	+14 47	6 4 42·954	+ ·001	F 93	−15 3482	3·11	−16 14	27 16·386	+ ·001
F*47	− 6 1469	4·09	− 6 15	12	—	F 94	+19 2584	5·18	+18 39	32 37·298	− ·012
F 47	+12 1084	5·11	+12 17	13 38·066	− ·029	F 95	− 7 3452	4·78	− 7 43	36 39·744	− ·006
F 48	+ 4 1236	4·48	+ 4 37	21 7·050	− ·010	F 96	+ 4 2669	3·66	+ 3 40	53 4·970	− ·015

TABLE I—CLOCK STARS—*Concluded*

Clock Star	BD Number	Mag.	Decl.	Right Ascension 1950 Ottawa Ledgers	0-FK3	Clock Star	BD Number	Mag.	Decl.	Right Ascension 1950 Ottawa Ledgers	0-FK3
	°		° ′	h m s	s		°		° ′	h m s	s
F 97	+11 2529	2·95	+11 14	12 59 41·192	−0·021	F 141	− 5 4876	3·55	− 4 58	19 3 35·680	+ ·001
F 98	− 4 3430	4·46	− 5 16	13 7 21·471	− ·002	F 142	+11 3790	5·14	+11 30	15 28·117	+ ·023
F 99	+ 6 2722	5·01	+ 5 44	15 4·685	·000	F 143	+ 2 3879	3·44	+ 3 01	22 58·612	+ ·020
F 100	−10 3672	1·21	−10 54	22 33·292	− ·018	F 144	− 7 5006	5·04	− 7 8	34 12·065	− ·006
F 101	+ 0 3076	3·44	− 0 20	32 8·570	+ ·009	F 145	+10 4043	2·80	+10 29	43 52·893	− ·010
F 102	+18 2782	4·51	+17 42	44 53·110	+ ·002	F 146	+18 4240	3·78	+18 25	19 45 9·416	− ·005
F 103	+19 2725	2·80	+18 39	52 18·190	+ ·014	F 147	+ 8 4236	0·89	+ 8 44	48 20·584	+ ·001
F 104	+ 2 2761	4·34	+ 1 47	59 5·930	− ·013	F 148	+ 6 4357	3·90	+ 6 17	52 51·382	+ ·006
F 105	− 9 3878	4·31	−10 3	14 10 13·459	+ ·006	F 149	+19 4229	3·71	+19 21	56 31·924	·000
F 106	+19 2777	0·24	+19 27	13 22·752	− ·010	F 150	− 1 3911	3·37	− 0 58	20 8 43·496	+ ·007
F 107	−12 4018	4·60	−13 9	16 23·966	− ·003	F 151	−12 5685	3·77	−12 42	15 16·867	− ·008
F 108	− 1 2957	4·99	− 2 0	25 37·355	− ·015	F 152	−15 5629	3·25	−14 56	18 12·172	− ·023
F 109	− 5 3936	3·95	− 5 27	40 25·287	+ ·002	F 153	+10 4321	3·98	+11 8	30 49·398	+ ·006
F 110	+ 2 2862	3·76	+ 2 6	43 43·068	− ·024	F* 154	+14 4369	3·72	+14 25	35 12·171	—
F 111	−15 3966	2·90	−15 50	48 6·452	+ ·004	F 154	+20 4658	4·78	+21 1	36 17·247	+ ·019
F 112	− 7 3938	4·8-5·9	− 8 19	58 17·818	+ ·010	F 155	+15 4222	3·86	+15 44	37 18·822	− ·044
F 113	− 8 3935	2·74	− 9 12	15 14 18·736	+ ·006	F 156	−10 5506	3·83	− 9 41	44 58·225	+ ·014
F 114	−14 4237	4·02	−14 37	32 43·482	+ ·009	F 157	− 9 5598	4·80	− 9 10	49 57·455	− ·015
F 115	+ 6 3088	2·75	+ 6 35	41 48·162	+ ·004	F 158	−11 5538	4·52	−11 35	21 6 52·301	·000
F 116	+15 2911	3·74	+15 35	43 52·665	− ·012	F 159	+ 4 4635	4·14	+ 5 2	13 19·437	+ ·001
F 117	− 2 4052	3·63	− 3 17	47 0·442	− ·013	F 160	+19 4691	4·27	+19 35	19 46·341	− ·006
F 118	+ 4 3069	3·75	+ 4 38	48 19·293	+ ·044	F 161	− 6 5770	3·07	− 5 48	28 55·643	− ·004
F 119	+16 2849	3·86	+15 49	54 8·446	− ·022	F 162	− 8 5701	4·78	− 8 5	35 5·449	− ·002
F 120	− 3 3903	3·03	− 3 34	16 11 43·321	− ·008	F 163	+ 9 4891	2·54	+ 9 39	41 43·758	+ ·005
F 121	− 4 4086	3·34	− 4 34	15 40·368	+ ·019	F 164	−16 5943	2·98	−16 21	44 16·966	− ·023
F 122	+19 3086	3·79	+19 16	19 42·727	− ·006	F 165	−14 6149	5·18	−13 47	50 34·282	− ·018
F 123	+21 2934	2·81	+21 36	28 4·106	+ ·002	F 166	− 1 4246	3·19	− 0 34	22 3 12·929	− ·016
F 124	−10 4350	2·70	−10 28	34 24·128	− ·010	F 167	+ 5 4961	3·70	+ 5 57	7 40·601	+ ·007
F 125	+ 9 3298	3·42	+ 9 27	55 17·971	+ ·009	F 168	− 8 5845	4·32	− 8 2	14 11·790	+ ·026
F 126	−10 4445	5·58	−10 28	17 7 1·890	− ·038	F 169	− 2 5741	3·97	− 1 38	19 4·430	+ ·009
F* 126	−15 4467	2·63	−15 40	7 30·437	—	F 170	−11 5850	4·89	−10 56	28 0·118	− ·005
F 127	+ 4 3422	4·44	+ 4 11	24 1·902	+ ·013	F 171	− 0 4384	4·13	− 0 23	32 47·190	− ·020
F 128	+12 3252	2·14	+12 36	32 36·688	− ·012	F 172	+10 4797	3·61	+10 34	38 57·994	− ·006
F 129	+ 4 3489	2·94	+ 4 35	41 0·050	+ ·008	F 173	− 8 5968	3·84	− 7 51	50 0·384	+ ·005
F 130	+ 2 3403	3·74	+ 2 43	45 23·037	+ ·012	F 174	+14 4926	2·57	+14 56	23 2 16·067	+ ·004
F 131	− 9 4632	3·50	− 9 46	56 16·352	+ ·021	F 175	− 6 6170	4·40	− 6 19	11 43·984	+ ·012
F 132	+ 2 3458	3·95	+ 2 56	58 8·398	+ ·060	F 176	+ 2 4648	3·85	+ 3 1	14 34·323	− ·008
F 133	+ 9 3564	3·73	+ 9 33	18 4 58·647	− ·012	F 177	+ 0 4998	4·94	+ 0 59	24 22·085	+ ·003
F 134	− 2 4599	3·42	− 2 55	18 43·262	+ ·003	F 178	+ 4 5035	4·28	+ 5 21	37 22·604	+ ·005
F 135	−14 5071	4·73	−14 36	26 20·793	− ·006	F 179	+18 5231	5·23	+18 51	49 56·423	− ·004
F 136	− 8 4638	4·06	− 8 17	32 29·113	+ ·010	F 180	+ 6 5227	4·03	+ 6 35	56 44·489	− ·006
F 137	− 9 4796	4·74	− 9 6	39 32·100	− ·003						
F 138	− 4 4582	4·47	− 4 48	44 31·250	+ ·022						
F 139	+ 4 3916	4·50	+ 4 08	53 43·982	+ ·007						
F 140	+14 3736	4·21	+15 0	57 21·111	·000						

Table I gives a list of the clock stars used. Those marked * are the clock stars that were replaced in 1941. Table II gives a comparison by hours of Right Ascension between the Ottawa observed positions and the FK3 positions. No corrections for clock star positions have been applied so this publication is affected by the periodic errors in right ascension introduced through the mean places of the FK3.

TABLE II—CLOCK STARS $\Delta\alpha$ (OTTAWA −FK3)

	s		s		s
0^h to 1^h	$-\cdot008_5$	8^h to 9^h	$+\cdot005_6$	16^h to 17^h	$+\cdot001_6$
1^h to 2^h	$-\cdot002_9$	9^h to 10^h	$+\cdot006_6$	17^h to 18^h	$+\cdot009_7$
2^h to 3^h	$+\cdot013_7$	10^h to 11^h	$+\cdot011_7$	18^h to 19^h	$+\cdot003_8$
3^h to 4^h	$-\cdot003_7$	11^h to 12^h	$+\cdot004_8$	19^h to 20^h	$+\cdot003_9$
4^h to 5^h	$+\cdot004_7$	12^h to 13^h	$-\cdot012_7$	20^h to 21^h	$-\cdot005_8$
5^h to 6^h	$-\cdot009_7$	13^h to 14^h	$-\cdot001_7$	21^h to 22^h	$-\cdot006_8$
6^h to 7^h	$-\cdot005_7$	14^h to 15^h	$-\cdot004_8$	22^h to 23^h	000_8
7^h to 8^h	$-\cdot001_9$	15^h to 16^h	$+\cdot002_7$	23^h to 24^h	$+\cdot001_7$

TABLE III—POLAR STARS AS ADOPTED FOR DETERMINATIONS OF AZIMUTH

BD Number		R.A. 1950			Decl. 1950			Observed −Adopted
		h	m	s	°	′	″	s
+85°	19	1	1	30·817	85	59	24·26	− ·112
+88°	8		48	48·609	89	1	43·72	−1·005
+82°	51	2	8	52·017	83	19	44·63	− ·305
+84°	59**	3	20	6·364	84	44	23·51	− ·183
+86°	51*		51	16·364	86	29	19·20	+ ·013
+85°	63	4	19	53·711	85	25	3·31	− ·036
+85°	74**	5	13	50·080	85	53	40·38	− ·076
+85°	80		45	34·322	85	10	27·38	− ·001
+87°	51	7	17	50·671	87	7	34·52	− ·322
+82°	201*		20	40·973	82	30	50·46	+ ·004
+84°	169**	8	5	13·720	84	12	30·89	− ·021
+89°	13*		45	54·169	88	46	15·09	− ·323
+84°	196**	9	5	16·340	84	23	10·47	+ ·066
+81°	302		30	7·447	81	33	0·28	− ·043
+84°	234*	10	22	41·756	84	30	28·87	− ·105
+83°	297		25	9·898	82	48	52·02	− ·009
+86°	161**	11	8	48·671	85	54	43·59	+ ·060
+86°	176**	12	2	9·928	85	51	50·84	− ·033
+88°	71*		14	44·554	87	58	37·53	+ ·279
+84°	289*		48	45·945	83	41	4·50	+ ·042
+83°	397**	13	43	40·850	83	0	12·93	− ·151
+83°	431**	14	53	33·631	82	43	7·05	− ·083
+87°	143*		53	34·866	87	25	20·22	− ·170
+83°	453**	15	48	28·262	83	6	3·39	− ·159
+82°	498	16	51	0·888	82	7	21·57	+ ·003
+86°	269	17	48	18·292	86	39	34·85	− ·149
+88°	112	18	21	21·379	89	3	3·50	.....
+83°	536**		30	47·796	83	8	32·48	− ·063
+84°	541**	20	6	53·181	84	31	36·35	+ ·036
+81°	718		46	19·839	82	20	52·38	− ·038
+86°	319*	21	9	16·096	86	49	57·40	+ ·080
+85°	383	22	17	33·718	85	51	27·05	− ·220
+83°	640**		54	53·121	84	4	43·87	+ ·136
+86°	344*	23	27	33·983	87	1	54·30	+ ·107
+82°	743**		54	3·915	82	54	46·37	+ ·003

The azimuth stars are listed in Table III. The stars that were discontinued in 1941 are marked * and those that were substituted are marked as **. This table gives the 1950 adopted positions.

The right ascensions of the stars were computed using Bessel's formula:—

$$\alpha = T + c' \sec \delta + n \tan \delta + M$$

where T is the time of transit.

c′ included corrections for collimation, diurnal aberration, pivot error and one-half the contact strip width.

The collimation line was determined before and after each observing period by means of horizontal collimators and generally the mean of these 2 readings was adopted to determine the collimation error. The mean of the 20 contacts and the half-strip width were determined usually once a month. Denoting the mean of contacts as M and the reading of the collimation line by C, the formula gives the collimation correction:—

$$\text{CL E} \quad c = (C\text{-}M)R$$
$$\text{CL W} \quad c = (M\text{-}C)R$$

R = 3ˢ.220 is the value of one revolution of the right ascension micrometer screw and the correction for the irregularity of the pivots is zero for this particular combination of circle settings.

The pivot errors determined in 1912 (See Publications of Dominion Observatory, Volume XV, No. 1, page 7) were re-measured in 1930 and again in 1950, the Cape method being used in each instance and the same form of the pivots was revealed in each case. Pivot irregularities measured

TABLE IV—PIVOT ERRORS

W Pointer	Δ c Clamp E		W Pointer	Δ c Clamp E		W Pointer	Δ c Clamp E	
	Read	Adopted		Read	Adopted		Read	Adopted
	s	s		s	s		s	s
0	·000	·000	120	−·023	−·025	240	−·024	−·025
5	·000	·000	125	−·024	−·025	245	−·024	−·023
10	+·001	+·002	130	−·024	−·025	250	−·020	−·020
15	+·005	+·004	135	−·023	−·023	255	−·018	−·016
20	+·008	+·007	140	−·020	−·021	260	−·013	−·011
25	+·012	+·011	145	−·016	−·018	265	−·008	−·006
30	+·014	+·014	150	−·012	−·014	270	−·001	·000
35	+·018	+·018	155	−·010	−·011	275	+·005	+·006
40	+·020	+·021	160	−·006	−·007	280	+·011	+·011
45	+·023	+·023	165	−·004	−·004	285	+·018	+·016
50	+·024	+·025	170	−·002	−·002	290	+·019	+·020
55	+·025	+·025	175	·000	·000	295	+·022	+·023
60	+·025	+·025	180	·000	·000	300	+·024	+·025
65	+·023	+·023	185	·000	·000	305	+·025	+·025
70	+·019	+·020	190	+·002	−·002	310	+·024	+·025
75	+·014	+·016	195	−·004	−·004	315	+·022	+·023
80	+·010	+·011	200	−·004	−·007	320	+·022	+·021
85	+·004	+·006	205	−·011	−·011	325	+·018	+·018
90	·000	·000	210	−·014	−·014	330	+·016	+·014
95	−·009	−·006	215	−·018	−·018	335	+·012	+·011
100	−·013	−·011	220	−·022	−·021	340	+·008	+·007
105	−·016	−·016	225	−·023	−·023	345	+·003	+·004
110	−·017	−·020	230	−·024	−·025	350	·000	+·002
115	−·020	−·023	235	−·025	−·025	355	·000	·000

as corrections to the level and azimuth were converted to a correction applicable to the collimation. Solutions were then made to find a function to best represent the observed values. The expression adopted was:—

$$\text{Pivot error} = 0^{s}.066 \sin^2\theta \cos\theta$$

where θ is the west pointer setting. Table IV gives the observed and adopted values as applied to this catalogue.

The clamp differences for all zones were investigated by using all the stars in the program that were common to the FK3. These were brought to the epoch 1950 using FK3 proper motions, and were compared by declinations, weighting them with the probability formula $\frac{m\,n}{m+n}$ where m and n are the number of observations in each clamp.

Table V gives the observed and adopted values of the clamp difference. The adopted corrections were obtained from the observations by smoothing them twice by the formula 1:2:1.

TABLE V— $\Delta\,\alpha$ (CLAMP WEST-CLAMP EAST) Cos δ

Decl.	Observed	Weight	Adopted
	s		s
60° L	+·041	5·8	+·017
65 L	−·009	8·8	+·011
70 L	+·031	5·4	+·006
75 L	000	3·7	−·001
80 L	−·003	36·6	−·003
85 L	−·003	206·3	−·002
90	+·019	3·3	000
85	+·003	177·8	+·001
80	−·003	57·6	+·001
75	+·015	2·7	+·001
70	+·009	10·0	+·007
65	+·009	9·0	+·015
60	+·023	16·5	+·019
55	+·021	16·5	+·019
50	+·022	32·8	+·016
45	+·007	43·8	+·011
40	+·008	43·4	+·007
35	+·002	29·8	+·006
30	+·005	41·6	+·007
25	+·013	22·9	+·008
20	+·008	66·9	+·006
15	+·001	59·3	+·003
10	+·003	83·2	+·001
5	−·001	87·6	−·001
0	−·002	73·2	−·003
−5	−·006	79·0	−·008
−10	−·018	90·9	−·011
−15	−·006	54·1	−·010
−20	−·005	45·8	−·009
−25	−·013	51·6	−·010
−30	−·008	9·2	−·011

After the clamp differences were applied the circumpolar stars were compared above and below the pole. Table VI gives this comparison and no correction was applied.

TABLE VI—COMPARISON OF STARS AT UPPER AND LOWER CULMINATION

Stars	$\Delta\alpha$ (Upper – Lower) Cos δ	Wt.
	s	
80° to 90°.....	– ·001	457
70° to 80°.....	+ ·003	18
60° to 70°.....	– ·004	39
	s	
TOTAL.....	– ·001	514

In order to determine the weighting required to combine observations made at upper and lower culmination, the ratios of the probable error of a single observation were compared. The results are given in Table VII.

TABLE VII—COMPARISON FOR COMBINING OBSERVATIONS AT UPPER AND LOWER CULMINATION.

Declination	$\left(\frac{p.e.\ \text{Lower}}{p.e.\ \text{Upper}}\right)^2$
60° to 65°	2·0
65° to 70°	1·2
70° to 75°	1·0

As a result observations at upper and lower culmination were combined with equal weights except for those stars which lie between 60° and 65° where the lower culminations were brought in with ½ weight. In the catalogue list of stars the number of observations is the equivalent number of transits at upper culmination.

DECLINATIONS

The declinations for this program were observed and compared in the same manner as those published in Volume XV, No. 2. Four bisections were taken on each star and 4 microscopes were used. The corrections for division error, and progressive error of the micrometer screw were the same as those given in these Publications, Volume XV, No. 1 and the refraction tables used are given in Volume XV, No. 2. No corrections for flexure were applied.

Corrections for the variation of latitude were computed from the values given by the International Latitude Service. The published values were used for the years 1935 to 1948. For 1949 and 1950 the corrections +″.004 for X and –″.022 for Y (Bulletin Geodesique No. 17, September 1950) were applied to bring them to the same system. The corrections applied are given in Table VIII.

TABLE VIII—VARIATION IN LATITUDE

Year	0·0	0·1	0·2	0·3	0·4	0·5	0·6	0·7	0·8	0·9	Year
	″	″	″	″	″	″	″	″	″	″	
1935	+0·02	−0·01	0·00	+0·03	+0·05	+0·06	+0·05	+0·06	+0·03	+0·02	1935
1936	+ ·04	+ ·06	+ ·08	+ ·09	+ ·09	+ ·08	+ ·05	·00	− ·03	− ·04	1936
1937	·00	+ ·02	+ ·09	+ ·13	+ ·16	+ ·15	+ ·08	+ ·03	− ·03	− ·05	1937
1938	− ·05	− ·03	+ ·05	+ ·11	+ ·14	+ ·15	+ ·16	+ ·12	+ ·01	− ·05	1938
1939	− ·06	− ·04	+ ·04	+ ·11	+ ·15	+ ·17	+ ·17	+ ·15	+ ·10	+ ·05	1939
1940	− ·01	− ·06	− ·04	+ ·03	+ ·11	+ ·15	+ ·14	+ ·13	+ ·10	+ ·06	1940
1941	+ ·03	·00	− ·01	·00	+ ·07	+ ·10	+ ·13	+ ·13	+ ·10	+ ·06	1941
1942	+ ·02	·00	·00	+ ·02	+ ·03	+ ·03	+ ·03	+ ·07	+ ·10	+ ·12	1942
1943	+ ·15	+ ·12	+ ·09	+ ·08	+ ·07	+ ·03	− ·01	− ·04	− ·03	·00	1943
1944	+ ·04	+ ·12	+ ·15	+ ·16	+ ·16	+ ·15	+ ·01	− ·10	− ·18	− ·15	1944
1945	− ·10	− ·03	+ ·09	+ ·19	+ ·25	+ ·27	+ ·13	+ ·04	− ·01	− ·18	1945
1946	− ·17	− ·14	− ·05	+ ·10	+ ·19	+ ·27	+ ·30	+ ·25	+ ·16	+ ·02	1946
1947	− ·07	− ·12	− ·08	− ·03	+ ·08	+ ·17	+ ·23	+ ·26	+ ·24	+ ·20	1947
1948	+ ·14	+ ·04	− ·02	− ·09	− ·10	− ·07	− ·03	+ ·03	+ ·14	+ ·27	1948
1949	+ ·27	+ ·27	+ ·22	+ ·11	+ ·01	− ·06	− ·13	− ·17	− ·09	+ ·05	1949
1950	+ ·16	+ ·27	+ ·32	+ ·29	+ ·23	+ ·14	− ·01	− ·15	− ·25	− ·26	1950

The clamp differences for all zones were investigated by using all the stars in the program which were common to the FK3. These were brought to the epoch 1950 using FK3 proper motions, and were compared by declination weighting them with the probability formula $\frac{m\,n}{m+n}$ where m and n are the number of observations in each clamp.

Table IX gives a comparison of declinations of the clock stars, clamp west minus clamp east in groups by declination and right ascension. This table shows there is no correction for clamp difference with change of right ascension. Table X gives the comparison for the FK3 azimuth stars dividing them into upper and lower culmination, and Table XI gives the same for the other FK3 stars. As there appeared to be no variation of clamp difference with declinations, these were combined in Table XII. The numbers in subscripts indicate the weights used.

TABLE IX—COMPARISONS OF DECLINATIONS CLAMP WEST AND CLAMP EAST
CLOCK STARS Δ δ (CL. W. – CL. E.)

Dec.	R.A.	h h 0 to 6	h h 6 to 12	h h 12 to 18	h h 18 to 24	Mean
°	°	″	″	″	″	″
−20 to	−15	.....	$+0{\cdot}54_{3}$	$+1{\cdot}01_{23}$	$+{\cdot}080_{6}$	$+0{\cdot}93_{32}$
−15 to	−10	$+0{\cdot}37_{13}$	$+{\cdot}53_{24}$	$+{\cdot}72_{67}$	$+{\cdot}57_{60}$	$+{\cdot}61_{164}$
−10 to	− 5	$+{\cdot}79_{45}$	$+{\cdot}78_{14}$	$+{\cdot}54_{71}$	$+{\cdot}61_{102}$	$+{\cdot}63_{232}$
− 5 to	0	$+{\cdot}62_{38}$	$+{\cdot}67_{32}$	$+{\cdot}69_{59}$	$+{\cdot}52_{114}$	$+{\cdot}60_{243}$
0 to	5	$+{\cdot}67_{26}$	$+{\cdot}52_{46}$	$+{\cdot}44_{86}$	$+{\cdot}35_{81}$	$+{\cdot}45_{239}$
5 to	10	$+{\cdot}67_{58}$	$+{\cdot}65_{110}$	$+{\cdot}67_{40}$	$+{\cdot}71_{107}$	$+{\cdot}68_{315}$
10 to	15	$+{\cdot}76_{29}$	$+{\cdot}75_{83}$	$+{\cdot}90_{29}$	$+{\cdot}74_{84}$	$+{\cdot}77_{225}$
15 to	20	$+{\cdot}58_{43}$	$+{\cdot}79_{49}$	$+{\cdot}67_{63}$	$+{\cdot}59_{65}$	$+{\cdot}66_{220}$
20 to	25	$+{\cdot}24_{4}$	$+{\cdot}66_{7}$	$+{\cdot}66_{18}$	$-{\cdot}15_{8}$	$+{\cdot}53_{32}$
		″	″	″	″	″
Mean.....		$+{\cdot}66_{258}$	$+{\cdot}67_{368}$	$+{\cdot}65_{456}$	$+{\cdot}59_{622}$	$+{\cdot}63_{1702}$

TABLE X—FK3 AZIMUTH STARS

Δ δ (Cl. W. - Cl. E.)

BD NO.		Upper	Lower
°		″	″
+81	302	$+1\cdot05_{10}$	$-0\cdot77_{14}$
+82	498	$+\cdot62_{25}$	$-\cdot02_{9}$
+81	718	$+\cdot56_{21}$	$-\cdot64_{11}$
+83	431	$-\cdot52_{6}$	$+\cdot92_{2}$
+83	297	$+\cdot98_{8}$	$-\cdot22_{10}$
+82	743	$+\cdot35_{7}$	$+\cdot05_{8}$
+83	397	$+\cdot03_{7}$	$-\cdot39_{5}$
+83	453	$+\cdot11_{2}$	$+1\cdot61_{2}$
+83	536	$+\cdot68_{7}$	$-\cdot12_{4}$
+82	51	$-\cdot71_{3}$	$+\cdot23_{4}$
+83	640	$+\cdot35_{9}$	$-\cdot60_{8}$
+84	169	$+\cdot34_{7}$	$-\cdot21_{11}$
+84	196	$+\cdot42_{6}$	$-\cdot57_{10}$
+84	451	$+\cdot82_{11}$	$-\cdot19_{5}$
+84	59	$+\cdot24_{8}$	$+\cdot27_{10}$
+85	80	$+\cdot68_{17}$	$-\cdot70_{26}$
+85	63	$+\cdot49_{13}$	$-\cdot30_{13}$
+85	383	$+\cdot32_{10}$	$-\cdot99_{7}$
+86	176	$+\cdot10_{4}$	$+\cdot13_{5}$
+85	74	$+\cdot37_{2}$	$+\cdot18_{6}$
+86	161	$-\cdot10_{3}$	$-\cdot45_{6}$
+85	19	$+\cdot68_{6}$	$-\cdot09_{15}$
+86	269	$+\cdot69_{29}$	$-\cdot58_{15}$
+87	51	$+\cdot73_{12}$	$-\cdot59_{29}$
+88	8	$+\cdot20_{4}$	$-\cdot29_{4}$
		″	″
Weighted Mean.....		$+\cdot52$	$-\cdot35$

TABLE XI—OTHER FK3 STARS

Δ δ (Cl. W. - Cl. E.)

Zone	Δδ (Cl. W.–Cl. E.)
	″
−30° to −20°	$+0\cdot56_{85}$
−20° to −10°	$+\cdot64_{79}$
−10° to 0°	$+\cdot44_{67}$
0° to 10°	$+\cdot53_{51}$
10° to 20°	$+\cdot65_{49}$
20° to 30°	$+\cdot68_{82}$
30° to 40°	$+\cdot66_{74}$
40° to 50°	$+\cdot54_{90}$
50° to 60°	$+\cdot38_{49}$
60° to 70°	$+\cdot55_{24}$
70° to 80°	$+\cdot55_{13}$
80L to 70L	$-\cdot60_{9}$
70L to 60L	$-\cdot46_{23}$
	″
Weighted Mean	$+\cdot57_{694}$

TABLE XII—SUMMARY

Δ δ (Cl. W. - Cl. E.)

Star Group	Δδ (Cl. W–Cl. E)
	″
Clock Stars.....	$+0\cdot63_{1702}$
Other FK3 Stars.....	$+\cdot44_{481}$
FK3 Polars.....	$+\cdot57_{694}$
	″
Weighted Mean.....	$+0\cdot58_{2878}$

Adopted value Δδ (Cl. W.–Cl. E.) = + 0″58

$\delta = \delta_E + 0''29$; $\delta = \delta_W - 0''29$

TABLE XIII—DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

BD Number		Z		Z′		Tan Z + Tan Z′	δ − δ′	n	n′	ρ	ν
°		°	′	°	′		″				″
+88	8	43	38	45	35	1·973	+0·20	16	17	8	−0·45
+87	51	42	44	46	29	1·976	+0·76	50	118	35	+0·11
+86	269	41	13	48	0	1·986	+0·62	121	62	41	−0·03
+85	19	40	36	48	37	1·991	+0·77	32	59	21	+0·12
+86	161	40	31	48	42	1·992	+0·61	13	22	8	−0·04
+85	74	40	30	48	43	1·992	+0·84	8	26	6	+0·19
+86	176	40	28	48	45	1·993	+0·04	19	26	11	−0·61
+85	383	40	28	48	45	1·993	+0·43	42	29	17	−0·22
+85	63	40	1	49	12	1·998	+0·68	50	72	30	+0·03
+85	80	39	47	49	26	2·000	+0·43	70	103	42	−0·22
+84	59	39	21	49	52	2·006	+0·35	28	47	18	−0·30
+84	451	39	8	50	5	2·009	+0·90	45	18	13	+0·25
+84	196	39	0	50	13	2·011	+1·00	29	42	17	+0·35
+83	640	38	49	50	24	2·013	+1·04	29	48	18	+0·39
+84	169	38	41	50	32	2·015	+0·99	37	32	17	+0·34
+82	51	37	56	51	17	2·027	+0·87	11	17	7	+0·22
+83	536	37	45	51	28	2·030	+0·98	36	17	12	+0·33
+83	453	37	43	51	30	2·031	+0·79	12	13	6	+0·14
+83	397	37	37	51	36	2·032	+0·58	34	19	12	−0·07
+82	743	37	31	51	42	2·034	+0·47	33	32	16	−0·18
+83	287	37	25	51	48	2·036	+0·71	32	41	18	+0·06
+83	431	37	20	51	53	2·037	+0·35	38	15	11	−0·30
+81	718	36	57	52	16	2·044	+0·62	85	46	30	−0·03
+82	498	36	44	52	29	2·049	+0·76	100	37	27	+0·11
+81	302	36	9	53	4	2·061	+0·58	39	55	23	−0·07

TABLE XIV—DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

BD Number		Z		Z′		Tan Z + Tan Z′	δ − δ′	n	n′	ρ	ν
°		°	′	°	′		″				″
+78	527	32	35	56	38	2·158	+0·99	8	4	3	+0·34
+76	928	31	58	57	15	2·179	+1·74	6	7	3	+1·09
+74	595	28	58	60	15	2·303	+0·91	10	8	4	+0·26
+72	957	26	58	62	15	2·409	+1·16	11	6	4	+0·51
+72	679	26	37	62	36	2·430	+0·89	8	6	3	+0·24
+79	1173	24	57	64	16	2·540	+0·77	7	3	2	+0·12
+70	665	24	13	65	0	2·594	+0·57	7	7	4	−0·08
+69	258	23	52	65	21	2·622	+0·36	5	3	3	−0·29
+67	1129	22	11	67	2	2·768	−0·73	8	3	2	−1·38
+65	1814	20	33	68	40	2·935	+1·03	10	7	4	+0·38
+65	517	20	20	68	52	2·958	−0·05	7	10	4	−0·70
+65	978	19	13	70	0	3·096	−0·13	7	6	4	−0·78
+64	391	19	1	70	12	3·122	+0·74	9	8	4	+0·09
+62	320	18	2	71	11	3·260	+1·14	7	11	4	+0·49
+61	2111	16	59	72	14	3·426	+0·55	8	7	4	−0·10
+62	1161	16	38	72	35	3·486	+0·71	3	3	2	+0·06
+62	1198	16	17	72	56	3·549	+0·72	6	7	3	+0·07
+61	1598	15	32	73	41	3·694	−0·09	16	8	5	−0·74

After the clamp differences had been applied the circumpolar stars were examined to determine the correction to the adopted latitude and refraction by use of the equations of the form:—

$$2\Delta\varphi + \Delta R(\text{Tan } Z + \text{Tan } Z') = \delta' - \delta$$

The values given in Tables XIII and XIV are for the individual stars; Z, n and δ apply to upper culmination, Z′, n′ and δ' to lower culmination, and the weight ρ was obtained using the formula $\frac{n\,n'}{n + n'}$, and ν is the residual after $\Delta\varphi = -0''.32$ has been removed. This led to the normal equations:

$$526(2\Delta\varphi) + 1107(\Delta R) = -341\cdot4$$
$$1107(2\Delta\varphi) + 2384(\Delta R) = -708\cdot5$$

ΔR and $\Delta\varphi$ are not separable from these equations since there were too few observations in the zone 60° to 70°. The solution is therefore given as: $\Delta\varphi = -0''.324 - 1\cdot052\Delta R$; for the reduction of these observations Δ R has been put equal to zero and $\Delta\varphi = -0''.32$.

Table XV gives the solution for 2 $\Delta\varphi$ without refraction correction; for this table the stars are grouped in 10° zones.

Latitude of Ottawa Meridian Circle as obtained by this catalogue is: 45° 23′ 38″.68.

In order to determine the weighting required to combine observations made at upper and lower culmination, the ratios of the probable error of a single observation were compared. The results are given in Table XVI.

As a result observations at upper and lower culmination were combined with equal weight.

TABLE XV—$\Delta\delta$ (UPPER-LOWER)

Star Group	Weight	$\Delta\delta$ (U-L)
		″
60° to 70°	36	+0·41
70° to 80°	26	+0·92
80° to 90°	464	+0·65
		″
Total	526	+0·65

TABLE XVI—COMPARISON FOR COMBINING OBSERVATIONS AT UPPER AND LOWER CULMINATION.

Declination	$\left(\frac{p.e.\ \text{Lower}}{p.e.\ \text{Upper}}\right)^2$
60° to 65°	1·4
65° to 70°	1·0
70° to 75°	1·0

COMPARISON WITH CATALOGUES

The observed position of each star, common to the FK3 and G.C. was reduced to the epoch 1950 using FK3 and G.C. proper motions. Differences were then formed giving for each star O – FK3 and O – G.C. The differences represent the corrections to FK3 and G.C. at the epoch of observation.

The individual differences of O – FK3 and O – G. C. were collected into groups covering 3 hours of right ascension and 5 degrees of declination. In Tables XVII to XXII the quantities $\Delta\alpha_\delta$ and $\Delta\delta_\delta$ represent weighted means taken over the 24 hours of right ascension and have been subtracted from the means of the groups so as to permit the remainder of the tables to exhibit variation with right ascension.

The individual differences in right ascensions for the zone 60° to 90° were multiplied by cos δ and collected into groups as described above and the results are shown in Tables XVIII and XXI.

Comparisons were made at all times with our previous catalogue, Volume XV, No. 2, which contained the same stars.

The clamp difference in right ascension for these 2 programs is the same although the object glass and eye end have been interchanged, but the micrometer head retained the same relative position for each clamp. It would appear therefore that the clamp difference was related to the micrometer head.

The clamp difference was examined and could be fairly well explained if there was a correction that could be expressed in the form $\Delta c = {}^{s}.015$. The instrument was examined for a frame correction (MN Volume 104, 1944, page 151) by setting the right ascension moving wires on the fixed wires in the telescope at various positions of the circle.

TABLE XVII—DIFFERENCES IN RIGHT ASCENSION (O–FK3)

Decl.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	s	s	s	s	s	s	s	s	s
+90 to +85	$-\cdot 189_{10}$	$-\cdot 369_{2}$	$+\cdot 151_{3}$	$-\cdot 133_{1}$	$+\cdot 249_{1}$	$+\cdot 156_{1}$	$+\cdot 040_{1}$	.....	$-\cdot 031_{1}$
+85 to +80	$-\cdot 054_{15}$	$-\cdot 251_{1}$	$-\cdot 129_{1}$	$+\cdot 033_{1}$	$+\cdot 059_{3}$	$-\cdot 063_{2}$	$-\cdot 024_{2}$	$+\cdot 032_{3}$	$+\cdot 124_{2}$
+80 to +75	$+\cdot 050_{2}$	.....	.....	.....	.....	.....	$-\cdot 094_{1}$	.....	$+\cdot 095_{1}$
+75 to +70	$+\cdot 012_{4}$	.....	.....	.....	.....	$+\cdot 026_{1}$	$+\cdot 065_{1}$	$-\cdot 040_{1}$	$-\cdot 051_{1}$
+70 to +65	$-\cdot 001_{5}$	.....	$+\cdot 024_{1}$	$-\cdot 012_{1}$	$+\cdot 032_{1}$	.....	.....	$-\cdot 037_{1}$	$+\cdot 005_{1}$
+65 to +60	$+\cdot 015_{8}$	$-\cdot 019_{2}$	$+\cdot 041_{1}$	.....	$+\cdot 027_{2}$	$-\cdot 009_{1}$	$-\cdot 006_{1}$	.....	$-\cdot 042_{1}$
+60 to +55	$-\cdot 002_{10}$	$+\cdot 007_{3}$	$+\cdot 005_{1}$	$-\cdot 020_{1}$	$+\cdot 020_{2}$	$-\cdot 032_{2}$	.....	.....	$+\cdot 016_{1}$
+55 to +50	$-\cdot 012_{13}$	$-\cdot 027_{1}$	$-\cdot 001_{1}$	.....	$+\cdot 016_{2}$	$+\cdot 013_{1}$	$-\cdot 016_{2}$	$-\cdot 002_{4}$	$+\cdot 009_{2}$
+50 to +45	$-\cdot 022_{23}$	$+\cdot 009_{2}$	$+\cdot 023_{5}$	$+\cdot 006_{4}$	$+\cdot 002_{2}$	$-\cdot 011_{3}$	$-\cdot 013_{4}$	$-\cdot 025_{3}$	.....
+45 to +40	$-\cdot 022_{18}$	$-\cdot 011_{2}$	$+\cdot 011_{3}$	$+\cdot 008_{3}$	$\cdot 000_{3}$	$-\cdot 002_{2}$	$+\cdot 005_{2}$	$-\cdot 005_{3}$	$-\cdot 014_{1}$
+40 to +35	$-\cdot 014_{16}$	$+\cdot 007_{3}$	$-\cdot 020_{2}$	$+\cdot 042_{2}$	$+\cdot 002_{1}$	$\cdot 000_{3}$	$+\cdot 006_{1}$	$-\cdot 032_{1}$	$-\cdot 016_{3}$
+35 to +30	$-\cdot 016_{18}$	$-\cdot 006_{2}$	$+\cdot 010_{2}$	.....	$-\cdot 009_{3}$	$+\cdot 010_{4}$	$+\cdot 001_{1}$	$-\cdot 005_{3}$	$-\cdot 004_{1}$
+30 to +25	$-\cdot 001_{21}$	$+\cdot 011_{2}$	$+\cdot 006_{3}$	$+\cdot 006_{3}$	$+\cdot 025_{2}$	$-\cdot 009_{3}$	$+\cdot 004_{2}$	$+\cdot 017_{3}$	$-\cdot 016_{3}$
+25 to +20	$-\cdot 004_{24}$	$-\cdot 002_{4}$	$-\cdot 010_{4}$	$-\cdot 006_{4}$	$-\cdot 011_{2}$	$-\cdot 020_{1}$	$+\cdot 007_{3}$	$+\cdot 004_{3}$	$+\cdot 023_{3}$
+20 to +15	$+\cdot 003_{40}$	$+\cdot 011_{6}$	$+\cdot 004_{6}$	$+\cdot 001_{4}$	$+\cdot 014_{4}$	$-\cdot 001_{6}$	$-\cdot 012_{4}$	$-\cdot 009_{5}$	$-\cdot 011_{5}$
+15 to +10	$+\cdot 001_{27}$	$-\cdot 011_{1}$	$-\cdot 003_{2}$	$-\cdot 005_{5}$	$+\cdot 010_{5}$	$-\cdot 002_{3}$	$+\cdot 007_{3}$	$-\cdot 004_{6}$	$-\cdot 002_{2}$
+10 to + 5	$+\cdot 002_{44}$	$-\cdot 002_{7}$	$-\cdot 005_{5}$	$+\cdot 003_{6}$	$+\cdot 005_{5}$	$\cdot 000_{4}$	$\cdot 000_{6}$	$-\cdot 002_{4}$	$\cdot 000_{7}$
+ 5 to 0	$+\cdot 005_{33}$	$-\cdot 002_{5}$	$+\cdot 010_{2}$	$-\cdot 023_{3}$	$-\cdot 012_{5}$	$-\cdot 017_{4}$	$+\cdot 021_{3}$	$+\cdot 005_{4}$	$-\cdot 007_{2}$
0 to − 5	$+\cdot 001_{41}$	$-\cdot 018_{3}$	$+\cdot 005_{4}$	$+\cdot 004_{6}$	$-\cdot 002_{4}$	$-\cdot 004_{5}$	$-\cdot 002_{5}$	$+\cdot 004_{7}$	$+\cdot 001_{7}$
− 5 to −10	$+\cdot 007_{40}$	$+\cdot 002_{5}$	$-\cdot 001_{8}$	$-\cdot 015_{3}$	$+\cdot 013_{4}$	$-\cdot 002_{6}$	$+\cdot 004_{3}$	$-\cdot 003_{6}$	$\cdot 000_{5}$
−10 to −15	$+\cdot 001_{36}$	$-\cdot 019_{4}$	$-\cdot 023_{2}$	$+\cdot 009_{4}$	$+\cdot 020_{5}$	$+\cdot 009_{7}$	$-\cdot 010_{5}$	$\cdot 000_{5}$	$-\cdot 001_{4}$
−15 to −20	$-\cdot 011_{33}$	$-\cdot 009_{7}$	$-\cdot 028_{3}$	$-\cdot 002_{5}$	$-\cdot 009_{2}$	$+\cdot 024_{5}$	$-\cdot 001_{3}$	$+\cdot 026_{3}$	$-\cdot 004_{5}$
−20 to −25	$-\cdot 009_{25}$	$-\cdot 007_{4}$	$+\cdot 017_{3}$	$-\cdot 023_{4}$	$+\cdot 017_{2}$	$+\cdot 018_{4}$	$+\cdot 003_{3}$	$+\cdot 006_{3}$	$+\cdot 005_{2}$
−25 to −30	$-\cdot 001_{26}$	$+\cdot 005_{1}$	$+\cdot 005_{1}$	$-\cdot 020_{2}$	$+\cdot 005_{2}$	$+\cdot 001_{4}$	$+\cdot 014_{6}$	$-\cdot 001_{8}$	$-\cdot 031_{2}$
Below −30	$-\cdot 008_{2}$	.....	.....	$+\cdot 002_{1}$	.....	.....	.....	$-\cdot 003_{1}$	.....

TABLE XVIII

$\Delta\alpha$ Cos δ (O–FK3)

Decl.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$								
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	s	s	s	s	s	s	s	s	s
90 to 85	$-\cdot 007_{10}$	$-\cdot 005_2$	$+\cdot 004_3$	$-\cdot 009_1$	$+\cdot 011_1$	$+\cdot 005_1$	$-\cdot 002_1$	.....	$-\cdot 009_1$
85 to 80	$-\cdot 005_{15}$	$-\cdot 030_1$	$-\cdot 012_1$	$+\cdot 003_1$	$+\cdot 005_3$	$-\cdot 010_2$	$-\cdot 005_2$	$+\cdot 002_3$	$+\cdot 012_3$
80 to 75	$+\cdot 012_2$	.....	.....	.....	.....	.....	$-\cdot 021_1$	.....	$+\cdot 020_1$
75 to 70	$+\cdot 003_4$	.....	.....	.....	.....	$+\cdot 007_1$	$+\cdot 021_1$	$-\cdot 011_1$	$-\cdot 016_1$
70 to 65	$\cdot 000_5$	.....	$+\cdot 008_1$	$-\cdot 005_1$	$+\cdot 011_1$	.....	.....	$-\cdot 015_1$	$+\cdot 002_1$
65 to 60	$+\cdot 006_3$	$-\cdot 009_2$	$+\cdot 018_1$	.....	$+\cdot 014_2$	$-\cdot 003_1$	$-\cdot 002_1$	.....	$-\cdot 019_1$

TABLE XIX—DIFFERENCES IN DECLINATION (O–FK3)

Decl.	$\Delta\delta_\delta$	$\Delta\delta_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	″	″	″	″	″	″	″	″	″
+90 to +85	$+\cdot 04_{10}$	$+\cdot 02_2$	$-\cdot 15_3$	$-\cdot 12_1$	$+\cdot 19_1$	$+\cdot 59_1$	$\cdot 00_1$	.....	$-\cdot 25_1$
+85 to +80	$+\cdot 04_{15}$	$+\cdot 18_1$	$-\cdot 13_1$	$-\cdot 22_1$	$+\cdot 12_3$	$+\cdot 06_2$	$+\cdot 04_2$	$+\cdot 05_3$	$-\cdot 24_3$
+80 to +75	$\cdot 00_2$	.....	.....	.....	.....	.....	$+\cdot 28_1$	.....	$-\cdot 28_1$
+75 to +70	$-\cdot 06_4$	.....	.....	.....	.....	$+\cdot 26_1$	$+\cdot 10_1$	$-\cdot 42_1$	$+\cdot 06_1$
+70 to +65	$-\cdot 02_5$	.....	$-\cdot 53_1$	$-\cdot 28_1$	$+\cdot 26_1$	.....	.....	$+\cdot 41_1$	$+\cdot 14_1$
+65 to +60	$+\cdot 09_3$	$-\cdot 02_2$	$-\cdot 02_1$	.....	$-\cdot 11_2$	$+\cdot 09_1$	$+\cdot 53_1$	.....	$-\cdot 34_1$
+60 to +55	$+\cdot 09_{10}$	$\cdot 00_3$	$+\cdot 15_1$	$-\cdot 37_1$	$+\cdot 07_2$	$-\cdot 09_2$	.....	.....	$+\cdot 24_1$
+55 to +50	$+\cdot 08_{13}$	$+\cdot 14_1$	$+\cdot 37_1$	.....	$-\cdot 12_2$	$-\cdot 20_1$	$+\cdot 12_2$	$+\cdot 14_4$	$-\cdot 06_2$
+50 to +45	$-\cdot 01_{23}$	$+\cdot 10_3$	$-\cdot 03_5$	$+\cdot 03_4$	$-\cdot 09_2$	$-\cdot 04_3$	$+\cdot 01_4$	$+\cdot 04_3$	.....
+45 to +40	$-\cdot 26_{18}$	$+\cdot 02_2$	$-\cdot 10_3$	$+\cdot 02_2$	$+\cdot 20_3$	$-\cdot 06_2$	$+\cdot 16_2$	$-\cdot 08_3$	$-\cdot 37_1$
+40 to +35	$-\cdot 20_{16}$	$+\cdot 18_3$	$+\cdot 18_2$	$-\cdot 46_2$	$+\cdot 45_1$	$-\cdot 03_2$	$-\cdot 08_1$	$+\cdot 03_1$	$-\cdot 07_3$
+35 to +30	$-\cdot 26_{16}$	$-\cdot 02_2$	$-\cdot 17_2$	.....	$+\cdot 21_3$	$+\cdot 04_4$	$+\cdot 07_1$	$-\cdot 14_3$	$+\cdot 01_1$
+30 to +25	$-\cdot 12_{21}$	$-\cdot 18_3$	$+\cdot 03_3$	$-\cdot 16_3$	$+\cdot 08_2$	$+\cdot 04_3$	$-\cdot 10_2$	$-\cdot 04_3$	$+\cdot 27_3$
+25 to +20	$-\cdot 28_{24}$	$-\cdot 19_4$	$+\cdot 15_4$	$-\cdot 13_4$	$+\cdot 43_2$	$-\cdot 38_1$	$+\cdot 22_3$	$-\cdot 21_3$	$+\cdot 06_3$
+20 to +15	$-\cdot 18_{41}$	$+\cdot 12_6$	$\cdot 00_7$	$+\cdot 15_4$	$-\cdot 03_4$	$-\cdot 10_6$	$+\cdot 11_4$	$-\cdot 13_5$	$-\cdot 09_5$
+15 to +10	$-\cdot 21_{23}$	$-\cdot 04_1$	$+\cdot 19_2$	$+\cdot 14_5$	$-\cdot 06_3$	$-\cdot 16_3$	$+\cdot 20_2$	$-\cdot 07_6$	$-\cdot 13_3$
+10 to + 5	$-\cdot 28_{45}$	$-\cdot 05_7$	$-\cdot 06_5$	$-\cdot 01_7$	$-\cdot 03_5$	$-\cdot 05_4$	$+\cdot 10_3$	$+\cdot 12_4$	$+\cdot 03_7$
+ 5 to 0	$-\cdot 23_{33}$	$-\cdot 19_5$	$-\cdot 17_2$	$+\cdot 29_3$	$-\cdot 12_5$	$+\cdot 01_4$	$+\cdot 21_3$	$-\cdot 08_4$	$-\cdot 27_2$
0 to − 5	$-\cdot 24_{41}$	$-\cdot 17_3$	$-\cdot 09_4$	$-\cdot 10_3$	$+\cdot 07_4$	$+\cdot 02_5$	$+\cdot 02_5$	$+\cdot 13_7$	$\cdot 00_7$
− 5 to −10	$-\cdot 20_{41}$	$-\cdot 17_5$	$-\cdot 10_9$	$+\cdot 17_3$	$-\cdot 01_4$	$-\cdot 08_6$	$+\cdot 17_3$	$+\cdot 19_6$	$+\cdot 04_5$
−10 to −15	$-\cdot 07_{37}$	$-\cdot 09_4$	$-\cdot 61_2$	$-\cdot 15_5$	$+\cdot 27_5$	$-\cdot 05_7$	$+\cdot 02_5$	$+\cdot 05_5$	$+\cdot 23_4$
−15 to −20	$+\cdot 06_{32}$	$-\cdot 21_7$	$-\cdot 11_3$	$+\cdot 26_3$	$+\cdot 00_5$	$-\cdot 11_2$	$+\cdot 06_3$	$+\cdot 17_3$	$+\cdot 03_5$
−20 to −25	$+\cdot 18_{25}$	$+\cdot 35_4$	$-\cdot 33_3$	$-\cdot 28_4$	$-\cdot 18_2$	$+\cdot 08_4$	$+\cdot 22_3$	$+\cdot 12_3$	$-\cdot 20_2$
−25 to −30	$+\cdot 32_{26}$	$-1\cdot 00_1$	$-\cdot 21_1$	$-\cdot 35_2$	$-\cdot 18_2$	$+\cdot 35_4$	$+\cdot 24_6$	$-\cdot 05_3$	$-\cdot 10_2$
Below −30	$+1\cdot 12_2$	.....	.....	$-\cdot 13_1$	.....	.....	.....	$+\cdot 13_1$	.....

TABLE XX—DIFFERENCES IN RIGHT ASCENSION (O–G.C.)

Decl.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$							
		0^h to 3^h	3^h to 6	6^{hh} to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	s	s	s	s	s	s	s	s	s
+90 to +85	$-\cdot 191_{18}$	$-\cdot 295_{2}$	$+\cdot 051_{5}$	$+\cdot 074_{3}$	$+\cdot 015_{1}$	$+\cdot 116_{3}$	$-\cdot 127_{1}$	.....	$-\cdot 039_{3}$
+85 to +80	$-\cdot 074_{40}$	$-\cdot 064_{4}$	$+\cdot 101_{3}$	$+\cdot 022_{5}$	$+\cdot 039_{8}$	$+\cdot 002_{6}$	$-\cdot 008_{5}$	$-\cdot 068_{6}$	$-\cdot 010_{3}$
+80 to +75	$-\cdot 020_{20}$	$-\cdot 031_{2}$	$+\cdot 078_{2}$	$+\cdot 066_{2}$	$-\cdot 010_{2}$	$+\cdot 011_{1}$	$-\cdot 035_{5}$	$-\cdot 021_{3}$	$+\cdot 010_{3}$
+75 to +70	$-\cdot 041_{20}$	$-\cdot 063_{1}$	$+\cdot 018_{3}$	$+\cdot 027_{3}$	$+\cdot 015_{3}$	$-\cdot 014_{3}$	$-\cdot 006_{3}$	$-\cdot 021_{2}$	$-\cdot 011_{2}$
+70 to +65	$-\cdot 051_{28}$	$-\cdot 011_{4}$	$+\cdot 036_{3}$	$+\cdot 004_{3}$	$+\cdot 007_{4}$	$-\cdot 016_{3}$	$-\cdot 028_{2}$	$-\cdot 023_{4}$	$+\cdot 017_{5}$
+65 to +60	$-\cdot 038_{26}$	$+\cdot 009_{6}$	$+\cdot 011_{4}$	$-\cdot 040_{3}$	$+\cdot 037_{5}$	$-\cdot 006_{4}$	$-\cdot 014_{5}$	$+\cdot 007_{4}$	$-\cdot 022_{5}$
+60 to +55	$-\cdot 022_{47}$	$-\cdot 007_{8}$	$-\cdot 009_{6}$	$-\cdot 022_{5}$	$+\cdot 010_{7}$	$+\cdot 007_{5}$	$-\cdot 007_{5}$	$+\cdot 009_{4}$	$+\cdot 017_{7}$
+55 to +50	$-\cdot 016_{61}$	$+\cdot 011_{5}$	$-\cdot 007_{4}$	$-\cdot 011_{6}$	$+\cdot 002_{6}$	$+\cdot 020_{7}$	$-\cdot 012_{8}$	$-\cdot 010_{7}$	$+\cdot 008_{8}$
+50 to +45	$-\cdot 036_{59}$	$+\cdot 022_{7}$	$+\cdot 013_{9}$	$-\cdot 001_{8}$	$-\cdot 010_{6}$	$-\cdot 001_{8}$	$+\cdot 002_{8}$	$-\cdot 010_{9}$	$-\cdot 031_{4}$
+45 to +40	$-\cdot 028_{56}$	$+\cdot 009_{9}$	$+\cdot 009_{10}$	$-\cdot 009_{4}$	$-\cdot 008_{7}$	$-\cdot 008_{6}$	$-\cdot 022_{5}$	$-\cdot 004_{9}$	$+\cdot 020_{6}$
+40 to +35	$-\cdot 028_{65}$	$+\cdot 013_{8}$	$-\cdot 007_{8}$	$+\cdot 008_{8}$	$+\cdot 012_{8}$	$-\cdot 003_{10}$	$-\cdot 015_{7}$	$-\cdot 012_{7}$	$+\cdot 002_{9}$
+35 to +30	$-\cdot 021_{60}$	$+\cdot 004_{8}$	$+\cdot 020_{7}$	$+\cdot 001_{5}$	$-\cdot 007_{7}$	$-\cdot 001_{8}$	$-\cdot 004_{10}$	$-\cdot 016_{9}$	$+\cdot 011_{6}$
+30 to +25	$-\cdot 018_{77}$	$+\cdot 021_{8}$	$-\cdot 015_{8}$	$-\cdot 012_{18}$	$-\cdot 014_{8}$	$-\cdot 007_{10}$	$+\cdot 006_{11}$	$+\cdot 009_{9}$	$+\cdot 016_{10}$
+25 to +20	$-\cdot 019_{83}$	$+\cdot 003_{10}$	$-\cdot 014_{13}$	$-\cdot 011_{11}$	$-\cdot 007_{11}$	$+\cdot 004_{9}$	$+\cdot 006_{9}$	$+\cdot 007_{11}$	$+\cdot 024_{9}$
+20 to +15	$-\cdot 011_{84}$	$+\cdot 020_{9}$	$\cdot 000_{10}$	$-\cdot 020_{11}$	$-\cdot 002_{13}$	$-\cdot 007_{11}$	$+\cdot 006_{11}$	$-\cdot 002_{10}$	$+\cdot 014_{9}$
+15 to +10	$-\cdot 003_{91}$	$+\cdot 008_{11}$	$-\cdot 001_{11}$	$-\cdot 018_{15}$	$-\cdot 009_{11}$	$+\cdot 002_{9}$	$+\cdot 010_{11}$	$+\cdot 001_{14}$	$+\cdot 013_{9}$
+10 to + 5	$-\cdot 005_{105}$	$+\cdot 011_{14}$	$-\cdot 017_{14}$	$-\cdot 017_{14}$	$-\cdot 007_{13}$	$+\cdot 005_{11}$	$-\cdot 001_{11}$	$+\cdot 005_{12}$	$+\cdot 019_{16}$
+ 5 to 0	$-\cdot 002_{84}$	$+\cdot 004_{10}$	$+\cdot 003_{10}$	$-\cdot 027_{10}$	$-\cdot 017_{11}$	$-\cdot 016_{10}$	$+\cdot 023_{12}$	$+\cdot 018_{11}$	$+\cdot 012_{10}$
0 to − 5	$\cdot 000_{91}$	$+\cdot 005_{12}$	$-\cdot 006_{10}$	$-\cdot 019_{13}$	$-\cdot 018_{9}$	$-\cdot 004_{11}$	$+\cdot 001_{11}$	$+\cdot 011_{11}$	$+\cdot 021_{14}$
− 5 to −10	$-\cdot 002_{88}$	$+\cdot 019_{10}$	$-\cdot 015_{14}$	$-\cdot 022_{8}$	$+\cdot 002_{8}$	$+\cdot 002_{14}$	$\cdot 000_{12}$	$+\cdot 002_{11}$	$+\cdot 014_{11}$
−10 to −15	$-\cdot 009_{82}$	$-\cdot 002_{10}$	$-\cdot 005_{9}$	$-\cdot 013_{9}$	$-\cdot 002_{12}$	$+\cdot 006_{11}$	$-\cdot 003_{11}$	$+\cdot 005_{11}$	$+\cdot 016_{9}$
−15 to −20	$-\cdot 012_{83}$	$+\cdot 006_{12}$	$-\cdot 018_{9}$	$-\cdot 026_{12}$	$-\cdot 008_{9}$	$+\cdot 002_{11}$	$+\cdot 016_{9}$	$+\cdot 019_{8}$	$+\cdot 013_{13}$
−20 to −25	$-\cdot 011_{75}$	$+\cdot 005_{8}$	$-\cdot 018_{11}$	$-\cdot 017_{11}$	$-\cdot 010_{7}$	$+\cdot 009_{9}$	$+\cdot 005_{10}$	$+\cdot 008_{12}$	$+\cdot 028_{7}$
−25 to −30	$-\cdot 004_{58}$	$+\cdot 011_{5}$	$-\cdot 024_{3}$	$-\cdot 016_{5}$	$-\cdot 012_{6}$	$+\cdot 004_{6}$	$+\cdot 009_{10}$	$+\cdot 001_{16}$	$+\cdot 002_{7}$
Below −30	$-\cdot 012_{3}$	.....	.....	$-\cdot 005_{1}$	.....	$+\cdot 019_{1}$	.....	$-\cdot 015_{1}$	.....

TABLE XXI

$\Delta\alpha$ Cos δ (O–G.C.)

Decl.	$\Delta\alpha_\delta$ Cos δ	$\Delta\alpha_\alpha$ Cos δ							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	s	s	s	s	s	s	s	s	s
90 to 85	$-\cdot 010_{18}$	$-\cdot 002_{2}$	$+\cdot 000_{5}$	$+\cdot 005_{3}$	$-\cdot 003_{1}$	$+\cdot 007_{3}$	$-\cdot 009_{1}$	.....	$-\cdot 004_{3}$
85 to 80	$-\cdot 009_{40}$	$-\cdot 010_{4}$	$+\cdot 013_{3}$	$+\cdot 003_{5}$	$+\cdot 005_{8}$	$-\cdot 001_{6}$	$-\cdot 002_{5}$	$-\cdot 008_{6}$	$-\cdot 001_{3}$
80 to 75	$-\cdot 004_{20}$	$-\cdot 007_{2}$	$+\cdot 018_{2}$	$+\cdot 013_{2}$	$-\cdot 003_{2}$	$+\cdot 002_{1}$	$-\cdot 008_{5}$	$-\cdot 006_{2}$	$+\cdot 002_{3}$
75 to 70	$-\cdot 013_{20}$	$-\cdot 018_{1}$	$+\cdot 005_{3}$	$+\cdot 009_{3}$	$+\cdot 005_{3}$	$-\cdot 003_{3}$	$-\cdot 001_{3}$	$-\cdot 007_{2}$	$-\cdot 003_{3}$
70 to 65	$-\cdot 020_{28}$	$-\cdot 004_{4}$	$+\cdot 014_{3}$	$+\cdot 001_{3}$	$+\cdot 002_{4}$	$-\cdot 006_{3}$	$-\cdot 008_{2}$	$-\cdot 009_{4}$	$+\cdot 006_{5}$
65 to 60	$-\cdot 018_{36}$	$+\cdot 004_{6}$	$+\cdot 006_{4}$	$-\cdot 019_{3}$	$+\cdot 017_{5}$	$-\cdot 002_{4}$	$-\cdot 006_{5}$	$+\cdot 004_{4}$	$-\cdot 009_{5}$

TABLE XXII—DIFFERENCES IN DECLINATION (O–G.C.)

Decl.	$\Delta\delta_\delta$	$\Delta\delta_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
° °	″	″	″	″	″	″	″	″	″
+90 to +85	$-\cdot01_{13}$	$-\cdot03_{2}$	$-\cdot16_{5}$	$-\cdot01_{3}$	$+\cdot32_{1}$	$+\cdot33_{3}$	$+\cdot28_{1}$	.....	$-\cdot14_{3}$
+85 to +80	$-\cdot01_{40}$	$-\cdot14_{4}$	$-\cdot31_{3}$	$-\cdot13_{5}$	$+\cdot09_{8}$	$-\cdot13_{6}$	$+\cdot23_{5}$	$+\cdot30_{6}$	$-\cdot21_{3}$
+80 to +75	$-\cdot01_{20}$	$+\cdot03_{2}$	$-\cdot34_{2}$	$-\cdot35_{2}$	$-\cdot15_{2}$	$+\cdot17_{1}$	$+\cdot33_{5}$	$+\cdot08_{3}$	$-\cdot17_{3}$
+75 to +70	$-\cdot01_{20}$	$-\cdot59_{1}$	$+\cdot02_{3}$	$-\cdot15_{3}$	$-\cdot11_{3}$	$+\cdot34_{3}$	$+\cdot19_{3}$	$-\cdot35_{2}$	$+\cdot21_{2}$
+70 to +65	$+\cdot09_{28}$	$-\cdot11_{4}$	$-\cdot37_{3}$	$-\cdot01_{3}$	$+\cdot14_{4}$	$-\cdot32_{3}$	$+\cdot61_{2}$	$+\cdot29_{4}$	$-\cdot07_{5}$
+65 to +60	$+\cdot13_{36}$	$-\cdot13_{6}$	$-\cdot21_{4}$	$-\cdot14_{2}$	$-\cdot08_{5}$	$+\cdot11_{4}$	$+\cdot44_{5}$	$+\cdot32_{4}$	$-\cdot30_{5}$
+60 to +55	$+\cdot20_{47}$	$+\cdot11_{3}$	$-\cdot33_{6}$	$-\cdot32_{5}$	$+\cdot11_{7}$	$+\cdot13_{5}$	$+\cdot30_{5}$	$-\cdot11_{4}$	$+\cdot02_{7}$
+55 to +50	$+\cdot18_{51}$	$-\cdot26_{5}$	$-\cdot46_{4}$	$-\cdot35_{6}$	$+\cdot11_{6}$	$-\cdot04_{7}$	$+\cdot43_{6}$	$+\cdot10_{7}$	$+\cdot09_{8}$
+50 to +45	$+\cdot12_{60}$	$-\cdot06_{7}$	$-\cdot07_{9}$	$-\cdot16_{8}$	$+\cdot11_{6}$	$+\cdot16_{8}$	$+\cdot21_{8}$	$-\cdot11_{9}$	$-\cdot10_{4}$
+45 to +40	$-\cdot08_{56}$	$+\cdot10_{9}$	$-\cdot21_{10}$	$-\cdot08_{4}$	$+\cdot29_{7}$	$+\cdot17_{6}$	$+\cdot04_{5}$	$-\cdot03_{9}$	$-\cdot24_{8}$
+40 to +35	$+\cdot05_{65}$	$-\cdot09_{8}$	$-\cdot20_{8}$	$-\cdot11_{8}$	$-\cdot02_{8}$	$+\cdot15_{10}$	$+\cdot18_{7}$	$+\cdot10_{7}$	$\cdot00_{9}$
+35 to +30	$+\cdot05_{60}$	$-\cdot09_{8}$	$-\cdot12_{7}$	$+\cdot19_{5}$	$+\cdot03_{7}$	$-\cdot10_{8}$	$+\cdot22_{10}$	$\cdot00_{9}$	$-\cdot16_{6}$
+30 to +25	$+\cdot03_{77}$	$-\cdot27_{8}$	$-\cdot12_{8}$	$-\cdot16_{13}$	$+\cdot28_{6}$	$-\cdot03_{10}$	$+\cdot21_{11}$	$+\cdot10_{9}$	$\cdot00_{10}$
+25 to +20	$-\cdot09_{83}$	$-\cdot21_{10}$	$-\cdot13_{12}$	$-\cdot18_{11}$	$+\cdot17_{11}$	$+\cdot04_{9}$	$+\cdot34_{9}$	$+\cdot01_{11}$	$-\cdot01_{9}$
+20 to +15	$\cdot00_{85}$	$+\cdot01_{9}$	$-\cdot04_{11}$	$-\cdot13_{11}$	$-\cdot20_{12}$	$+\cdot10_{11}$	$+\cdot33_{11}$	$+\cdot01_{10}$	$-\cdot06_{8}$
+15 to +10	$+\cdot02_{92}$	$-\cdot17_{11}$	$-\cdot28_{11}$	$-\cdot03_{15}$	$-\cdot01_{12}$	$+\cdot16_{9}$	$+\cdot29_{11}$	$+\cdot11_{14}$	$-\cdot02_{9}$
+10 to + 5	$-\cdot06_{106}$	$-\cdot19_{14}$	$-\cdot13_{14}$	$-\cdot02_{15}$	$\cdot00_{13}$	$-\cdot07_{11}$	$+\cdot29_{11}$	$+\cdot16_{12}$	$+\cdot02_{16}$
+ 5 to − 0	$-\cdot07_{84}$	$-\cdot12_{10}$	$-\cdot35_{10}$	$+\cdot01_{10}$	$-\cdot07_{11}$	$+\cdot14_{10}$	$+\cdot26_{12}$	$+\cdot08_{11}$	$-\cdot02_{10}$
0 to − 5	$-\cdot01_{91}$	$-\cdot16_{12}$	$-\cdot03_{10}$	$-\cdot07_{13}$	$-\cdot06_{9}$	$+\cdot05_{11}$	$+\cdot25_{11}$	$+\cdot09_{11}$	$-\cdot06_{14}$
− 5 to −10	$-\cdot04_{90}$	$-\cdot33_{10}$	$-\cdot14_{15}$	$+\cdot24_{9}$	$-\cdot18_{8}$	$+\cdot08_{14}$	$+\cdot18_{12}$	$+\cdot11_{11}$	$+\cdot03_{11}$
−10 to −15	$\cdot00_{82}$	$-\cdot23_{10}$	$-\cdot48_{9}$	$-\cdot16_{10}$	$+\cdot23_{12}$	$+\cdot08_{11}$	$+\cdot32_{11}$	$+\cdot08_{11}$	$+\cdot04_{9}$
−15 to −20	$+\cdot08_{82}$	$-\cdot23_{12}$	$-\cdot24_{9}$	$-\cdot01_{12}$	$+\cdot15_{9}$	$+\cdot15_{11}$	$+\cdot12_{9}$	$-\cdot04_{8}$	$+\cdot07_{13}$
−20 to −25	$+\cdot23_{75}$	$-\cdot03_{8}$	$-\cdot51_{11}$	$+\cdot31_{11}$	$-\cdot08_{7}$	$+\cdot21_{9}$	$+\cdot32_{10}$	$-\cdot07_{12}$	$-\cdot15_{7}$
−25 to −30	$+\cdot40_{88}$	$-\cdot40_{5}$	$-\cdot46_{3}$	$-\cdot25_{6}$	$-\cdot08_{6}$	$+\cdot12_{6}$	$+\cdot30_{10}$	$+\cdot11_{16}$	$-\cdot06_{7}$
Below −30	$+\cdot88_{3}$	.....	.....	$+\cdot35_{1}$	.....	$-1\cdot05_{1}$	.....	$+\cdot70_{1}$	.....

TABLE XXIII—FRAME CORRECTION

SETTING	CORRECTION	DECLINATION	
		CL. E.	CL. W.
0°	+0″.0057	Nadir	
90°	− ·0053	N	S
135°	− ·0020	90°	0°
180°	− ·0010	45°	45°
225°	·0000	0°	90°
270°	− ·0027	S	N

This correction would give a correction at the zenith of only ˢ.000 to clamp east and −ˢ.001 to clamp west.

The micrometer was examined with the personal equation machine to determine if there was a change of collimation with the speed of the micrometer drive in following a star. No shift was determined.

The clamp differences in declination were also compared. $\Delta\delta$ (CL.W. – CL.E.) for this program was +0″.58 as compared with the previous program of +0″.42. No frame correction was determined in this co-ordinate.

CATALOGUE OF 1,525 STARS
OBSERVED IN THE YEARS 1935 TO 1950
REDUCED WITHOUT PROPER MOTION
TO THE
EQUINOX 1950·0

92726—24

EXPLANATION OF THE SEPARATE COLUMNS

Column 1. The number of the star in this catalogue, the stars being arranged in order of right ascension.

Column 2. The B.D. or C.D. zone and number.

Column 3. The visual magnitude and spectral type as obtained from G.C. and Henry Draper. The magnitudes for variable stars and composite spectral types are given in footnotes.

Columns 4 and 8. The mean right ascension and declination as determined at Ottawa, reduced to the equinox 1950·0 without proper motion.

Columns 5 and 6, 9 and 10. The precession and secular variation for the stars are given on the basis of 100 years. The values were obtained from other catalogues and are based on Newcomb's precession tables.

Columns 7 and 8. Proper motion in right ascension and declination per 100 years. The proper motions were taken from the FK3, G.C. and the First Greenwich Catalogue of Stars 1925·0.

Column 12. The numbers indicate the number of observations in right ascension and declination respectively.

Columns 13 and 14. Mean epoch of observations in right ascension and declination respectively. Where only one figure is given it applies to both.

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°			h m s	s	s	s	° ′ ″	″	″	″				
1	−18	6417	4·62 A 0	0 1 10·756	+307·11	−0·38	+0·16	−17 36 51·59	+2004·2	−0·6	−0·2	8		41·75	
2	+13	5201	7·26 F 0	0 1 21·824	+307·52	+0·48	+0·71	+14 6 2·74	+2004·3	−0·6	−1·1	7		38·87	
3	+26	4744	6·57 G 5	0 2 26·517	+308·07	+0·88	+0·50	+27 23 47·62	+2004·1	−0·6	−0·5	6	7	39·86	39·30
4	+44	4550	6·51 A 0	0 2 35·038	+308·83	+1·60	−0·15	+44 57 3·77	+2004·1	−0·7	−1·7	7	6	40·30	40·37
5	+39	5219	6·71 G 5	0 3 29·313	+309·04	+1·38	+0·10	+40 8 24·73	+2004·0	−0·8	−0·5	6	8	42·52	41·37
6	−23	4	6·06 F 0	0 4 16·639	+306·25	−0·54	+0·73	−23 23 6·42	+2003·9	−0·8	−4·0	8	7	46·65	46·64
7	− 3	2	6·33 B 8	0 5 10·431	+307·18	+0·04	+0·14	− 2 49 37·58	+2003·7	−1·0	+0·3	7	7	42·13	41·69
8	+28	4	2·15 A 0p	0 5 47·766	+309·19	+0·94	+1·03	+28 48 53·46	+2003·6	−1·0	−15·9	6		41·35	
9	+58	3	2·42 F 5	0 6 29·200	+313·60	+2·68	+6·75	+58 52 27·98	+2003·4	−1·1	−17·8	6	7	42·18	42·14
10	+16	3	7·17 G 0	0 6 44·910	+308·55	+0·58	−0·05	+17 15 27·71	+2003·4	−1·1	−13·5	6		43·18	
11	+56	11	6·54 B 8	0 7 51·672	+314·36	+2·51	+0·27	+56 53 15·02	+2003·1	−1·2	+ 0·9	6	7	42·83	42·43
12	−13	13	5·94 K 0	0 8 9·142	+306·24	−0·22	+1·04	−12 51 28·31	+2003·0	−1·2	− 3·2	6		43·81	
13	+65	13	7·15 A 0	0 9 9·623	+319·24	+3·70	+0·21	+65 50 54·37	+2002·7	−1·4	+ 0·7	11	12	47·03	47·14
14	+14	14	2·87 B 2	0 10 39·437	+308·98	+0·52	+0·01	+14 54 20·36	+2002·2	−1·5	− 0·6	19	47	46·94	43·19
15	+ 3	26	7·02 A 0	0 13 23·126	+307·87	+0·24	+0·06	+ 3 58 24·86	+2000·8	−1·8	− 1·3	8		46·74	
16	+22	34	7·18 K 0	0 14 19·108	+310·86	+0·78	+0·26	+22 58 43·13	+2000·3	−1·8	− 1·2	6		42·18	
17	+11	34	6·63 G 5	0 15 21·489	+309·31	+0·47	−0·13	+12 29 38·84	+1999·8	−2·0	− 1·2	5		43·45	
18	+30	35	5·80 A 0	0 16 1·166	+312·99	+1·08	+0·47	+31 14 23·20	+1999·4	−2·0	+ 0·4	6		43·87	
19	+42	48	6·04 B 9	0 16 3·462	+316·21	+1·64	+0·14	+43 30 48·98	+1999·4	−2·0	− 0·2	6	5	41·88	42·48
20	− 8	38	6·50 G 0	0 16 7·290	+305·95	−0·08	+2·75	− 8 19 42·50	+1999·3	−2·0	−13·4	3		45·15	
21	− 9	48	3·75 K 0	0 16 52·781	+305·75	−0·10	−0·12	− 9 06 3·14	+1998·9	−2·0	− 2·7	7	15	47·82	45·59
22	−18	41	6·88 K 0	0 17 30·842	+304·02	−0·33	+0·50	−17 58 39·81	+1998·4	−2·1	+ 0·9	4	5	42·79	43·58
23	+52	61	5·72 B 9	0 22 23·361	+324·48	+2·33	+0·23	+52 46 11·89	+1994·8	−2·8	− 0·4	8	7	40·88	40·89
24	−12	72	7·54 M b	0 25 28·237	+304·20	−0·14	+0·30	−11 56 6·24	+1991·9	−2·9	− 1·5	7	7	46·35	45·66
25	+15	63	6·46 K 2	0 25 36·569	+311·65	+0·60	+0·11	+16 10 7·76	+1991·7	−3·0	− 1·1	6	7	38·56	38·16
26	+ 9	47	6·02 F 2	0 25 44·742	+309·95	+0·43	+0·19	+ 9 55 0·28	+1991·6	−3·0	−20·5	6		40·57	
27	−21	57	6·41 G 0	0 25 50·738	+301·67	−0·37	−0·83	−20 36 35·12	+1991·5	−2·9	−10·5	4	6	44·33	43·84
28	+63	53	7·16 A 0	0 27 24·722	+340·71	+3·94	+0·25	+64 28 22·54	+1990·0	−3·4	+ 0·8	8	11	44·16	44·38
29	+28	75	5·26 F 0	0 27 28·642	+316·35	+1·06	+0·28	+29 28 34·46	+1989·9	−3·2	− 5·3	6	7	38·57	38·76
30	− 4	54	6·05 K 5	0 27 29·155	+306·14	+0·06	+0·06	− 4 14 0·37	+1989·9	−3·1	− 0·3	14	26	48·65	47·40
31	+38	68	7·05 F 0	0 30 2·208	+321·25	+1·46	−0·04	+38 34 6·22	+1987·0	−3·5	− 1·8	7		42·28	
32	−26	160	6·87 K 0	0 30 10·007	+298·91	−0·49	−0·03	−25 38 4·41	+1987·0	−3·3	− 4·4	6		47·42	
33	− 4	62	5·24 G 0	0 32 40·047	+306·04	+0·08	+2·74	− 3 52 4·27	+1983·9	−3·6	− 2·0	2	19	37·85	37·88
34	+14	76	5·86 B 3	0 34 10·758	+312·63	+0·60	+0·01	+14 57 24·66	+1982·0	−3·8	− 1·6	8	9	42·28	42·25
35	+ 2	80	6·58 K 0	0 34 55·814	+308·34	+0·26	+0·60	+ 2 51 40·94	+1981·0	−3·8	− 5·5	7		40·18	
36	+81	13	6·40 F 8	0 35 54·488	+459·90	+21·68	−5·46	+82 13 5·30	+1979·7	−5·6	+ 9·1	11	12	46·93	46·96
37	+48	192	5·72 K 2	0 36 23·380	+331·70	+2·16	+0·04	+49 4 47·94	+1979·1	−4·2	− 1·0	5	5	38·71	40·11
38	+20	85	6·08 K 0	0 36 45·810	+315·51	+0·79	−3·33	+20 58 56·24	+1978·6	−4·1	−36·9	6	9	38·07	37·55
39	+55	139	* K 0	0 37 39·276	+340·05	+2·86	+0·60	+56 15 48·88	+1977·3	−4·5	− 2·8	10	8	45·93	46·08
40	−17	109	6·46 G 5	0 37 58·062	+300·68	−0·22	+0·23	−16 47 25·73	+1976·8	−4·0	− 3·4	6		46·49	
41	− 5	101	6·12 G 5	0 38 9·612	+305·54	+0·08	−0·12	− 4 37 33·86	+1976·6	−4·1	− 1·4	7		40·61	
42	−18	115	2·24 K 0	0 41 4·657	+299·46	−0·26	+1·65	+18 15 39·17	+1972·2	−4·4	+ 4·0	8		41·39	
43	+32	122	7·02 A 5	0 41 10·432	+322·85	+1·26	+0·03	+33 2 12·75	+1972·0	−4·6	+ 1·4	7	9	37·33	37·91
44	+58	101	6·49 G 5	0 43 46·553	+350·06	+3·36	−0·11	+59 18 6·01	+1967·8	−5·3	+ 0·3	6		41·20	
45	+ 5	104	6·20 G 5	0 44 48·300	+310·27	+0·39	+0·06	+ 6 28 6·38	+1966·1	−4·8	− 1·1	6		47·13	
46	+25	118	7·06 K 0	0 45 4·255	+320·07	+0·99	+0·77	+26 1 7·23	+1965·6	−5·0	+ 1·0	6		45·15	
47	−22	134	5·45 B 9	0 45 32·604	+296·68	−0·33	+0·17	−21 59 41·26	+1964·9	−4·7	− 0·9	5	4	46·00	45·56
48	+ 6	107	4·55 K 5	0 46 5·090	+310·76	+0·41	+0·55	+ 7 18 47·53	+1963·9	−5·0	− 4·5	8	23	47·29	44·44
49	+16	76	5·23 F 5	0 46 20·802	+315·37	+0·68	−0·02	+16 40 15·89	+1963·4	−5·0	−19·7	6		48·14	
50	−14	145	5·84 K 2	0 46 54·881	+300·64	−0·12	+0·70	−13 49 56·10	+1962·4	−4·9	− 9·2	3		47·84	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*39 2^m 1 to 2^m 6

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
51	− 1	104	6·80	K 0	0	47	21·173	+307·09	+ 0·21	+0·21	− 0	29	46·39	+1961·6	−5·0	+ 1·4	4		48·04	
52	+44	176	6·12	A 0	0	47	30·082	+334·56	+ 1·92	+0·64	+44	43	48·63	+1961·3	−5·4	+ 0·5	6		47·17	
53	− 1	114	4·92	K 0	0	50	27·030	+306·61	+ 0·20	+0·03	− 1	24	55·53	+1955·8	−5·3	− 1·3	10	24	48·22	45·74
54	+36	148	6·13	K 0	0	50	42·924	+329·54	+ 1·49	+0·08	+37	8	51·78	+1955·4	−5·7	− 4·5	7	6	44·84	44·51
55	+13	127	6·83	G 5	0	53	31·457	+314·85	+ 0·61	0·00	+13	40	53·60	+1949·9	−5·7	− 0·6	5	6	44·00	43·98
56	+59	144	*	B 0p	0	53	40·218	+362·01	+ 3·70	+0·28	+60	26	47·70	+1949·6	−6·6	− 0·2	6		41·77	
57	+37	175	3·94	A 2	0	53	58·093	+331·88	+ 1·56	+1·27	+38	13	42·63	+1948·9	−6·1	+ 3·7	6	7	45·31	44·56
58	+ 0	149	7·29	G 5	0	55	5·397	+308·16	+ 0·28	+0·07	+ 1	30	55·19	+1946·6	−5·8	+ 1·3	6		45·79	
59	+20	131	6·41	A 0	0	55	38·772	+319·74	+ 0·84	−0·06	+21	8	4·62	+1945·5	−6·0	− 0·1	6	7	44·03	44·01
60	− 6	176	6·70	K 0	0	56	13·724	+303·84	+ 0·10	+0·03	− 6	9	5·61	+1944·2	−5·8	− 7·3	6		46·68	
61	+68	64	6·67	B 9	0	58	11·010	+395·16	+ 6·18	−0·04	+69	5	23·22	+1940·0	−7·6	− 0·1	8	8	47·97	47·05
62	−17	180	6·58	G 5	0	59	9·756	+297·20	− 0·15	+0·55	−16	31	59·66	+1937·8	−6·0	− 7·1	5		47·61	
63	+ 7	153	4·45	K 0	1	0	20·696	+311·98	+ 0·46	−0·54	+ 7	37	16·87	+1935·1	−6·3	+ 3·0	7	12	48·10	45·78
64	+51	220	6·27	K 2	1	1	5·248	+352·76	+ 2·66	+0·10	+52	14	5·66	+1933·4	−7·2	− 5·6	6		48·34	
65	+85	19	4·52	K 0	1	1	29·904	+812·81	+88·24	+7·79	+85	59	24·30	+1932·6	−16·2	− 0·6	93	91	39·64	39·98
66	+28	174	6·08	F 5	1	1	43·236	+327·36	+ 1·18	+0·62	+29	23	32·97	+1932·0	− 6·8	−11·3	5		48·02	
67	−24	484	6·29	G 5	1	3	42·453	+290·80	− 0·31	−0·19	−24	15	32·84	+1927·3	− 6·2	− 4·2	7	6	47·61	47·58
68	+31	185	6·29	F 2	1	5	14·840	+330·55	+ 1·28	+1·56	+31	44	45·32	+1923·6	− 7·2	− 3·4	6		47·42	
69	−10	238	5·87	F 2	1	5	15·233	+300·67	+ 0·02	+1·00	−10	3	9·91	+1923·5	− 6·6	+ 2·3	4	5	47·76	47·97
70	+19	185	5·63	A 2	1	5	15·910	+321·34	+ 0·85	+0·60	+20	28	25·36	+1923·5	− 7·0	− 9·2	6		47·53	
71	+ 9	132	6·90	M a	1	5	44·785	+313·75	+ 0·52	−0·05	+ 9	38	29·46	+1922·4	− 6·9	+ 0·7	6		45·21	
72	−10	240	3·60	K 0	1	6	4·357	+300·32	+ 0·02	+1·47	−10	26	47·53	+1921·5	− 6·6	−12·8	4	21	45·84	40·77
73	+34	198	2·37	M a	1	6	55·348	+334·62	+ 1·46	+1·46	+35	21	22·80	+1919·4	− 7·4	−11·2	6		43·74	
74	+45	291	6·86	K 5	1	8	16·054	+347·82	+ 2·13	+0·02	+45	55	7·53	+1916·0	− 7·8	− 2·5	5	6	40·90	40·58
75	+64	127	5·49	B 8	1	8	24·549	+390·65	+ 4·92	+0·38	+64	45	12·59	+1915·6	− 8·8	− 1·1	5	9	48·13	47·36
76	− 7	196	6·93	G 5	1	10	16·663	+302·34	+ 0·11	−0·40	− 7	2	53·27	+1910·8	− 7·0	− 1·1	6	6	43·96	42·32
77	− 1	162	5·82	F 5	1	12	15·894	+306·43	+ 0·26	−0·11	− 1	14	28·78	+1905·5	− 7·3	+21·0	8		41·92	
78	+38	229	6·55	B 9	1	12	25·108	+342·12	+ 1·70	−0·14	+39	13	1·96	+1899·5	− 8·4	+ 0·5	8	6	41·99	42·05
79	+43	262	7·25	K 5	1	14	46·543	+349·22	+ 2·04	+0·05	+44	22	7·57	+1898·5	− 8·6	− 0·5	6		46·16	
80	+ 2	185	5·28	A 2	1	15	13·016	+309·85	+ 0·37	−0·35	+ 3	21	6·08	+1897·3	− 7·6	− 1·9	9	30	48·19	42·95
81	+57	260	5·25	F5p	1	16	55·113	+377·67	+ 3·56	0·00	+51	58	10·45	+1892·4	− 9·4	+ 0·1		45	6·52	
82	−16	223	6·75	G 0	1	17	30·190	+294·56	− 0·08	+0·38	−16	4	29·25	+1890·8	− 7·6	− 9·4	6		42·35	
83	+21	178	7·24	K 5	1	18	31·861	+325·57	+ 9·4	+0·08	+22	6	45·94	+1887·7	− 8·4	+ 0·6	6		43·26	
84	+10	168	6·89	F 0	1	18	40·666	+316·30	+ 0·60	+0·36	+11	16	29·95	+1887·3	− 8·2	+ 1·5	7	7	40·63	41·23
85	− 8	244	3·83	K 0	1	21	31·386	+300·42	+ 0·10	−0·54	− 8	26	28·42	+1878·8	− 8·0	−21·5	18	32	46·24	44·18
86	− 3	195	6·38	G 5	1	22	16·135	+304·78	+ 0·23	+0·11	− 3	6	29·36	+1876·5	− 8·2	− 2·9	6		44·16	
87	+59	248	2·80	A 5	1	22	31·317	+388·80	+ 3·99	+3·96	+59	58	34·82	+1875·7	−10·4	− 4·6	6	5	45·64	45·23
88	+26	239	6·87	K 0	1	23	57·585	+331·71	+ 1·12	−0·06	+26	59	17·49	+1871·3	− 9·0	− 4·9	7		40·60	
89	+18	189	5·63	K 0	1	23	59·296	+323·80	+ 8·4	+0·31	+18	58	55·31	+1871·2	− 8·8	− 5·7	6	7	43·23	42·77
90	−13	262	5·68	F 0	1	24	23·451	+295·94	+ 0·01	+0·12	−13	18	57·43	+1869·9	− 8·2	+ 1·2	9		44·93	
91	−26	491	6·55	K 0	1	27	21·035	+283·22	− 0·24	+0·25	−25	52	32·72	+1860·4	− 8·1	+ 2·0	6	7	45·97	46·38
92	+14	231	3·72	G 5	1	28	48·212	+320·94	+ 7·20	+0·18	+15	5	19·15	+1855·7	− 9·2	− 0·3	13	37	46·25	43·02
93	+34	265	6·28	B 8	1	29	16·037	+342·25	+ 1·48	−0·10	+34	32	35·72	+1854·1	− 9·8	− 0·1	7	8	45·79	46·03
94	+54	315	7·17	K 5	1	30	15·635	+379·72	+ 3·17	−0·06	+54	41	19·23	+1850·9	−11·0	+ 1·9	6		45·98	
95	− 7	256	5·88	G 0	1	31	11·733	+300·71	+ 0·16	+1·20	− 7	16	48·76	+1847·7	− 8·8	− 7·5	6	7	44·65	44·01
96	+13	240	6·20	B 9	1	33	5·737	+320·89	+ 7·10	+0·02	+14	24	23·14	+1841·1	− 9·6	− 0·9	6	7	37·39	38·18
97	+47	460	6·17	K 0	1	33	23·026	+367·11	+ 2·46	−0·15	+48	28	5·27	+1840·2	−11·0	− 1·6	5	6	41·76	42·14
98	−16	270	5·48	K 0	1	33	32·577	+292·46	− 0·02	+0·11	−15	39	19·90	+1839·6	− 8·8	+ 2·2	5	6	45·01	44·00
99	+ 2	264	6·86	K 2	1	35	52·613	+328·33	+ 0·93	+0·36	+21	8	40·48	+1831·4	−10·2	− 0·3	5	6	44·90	45·36
100	+77	58	6·62	B 9	1	36	9·805	+557·33	+16·74	+0·54	+77	42	58·36	+1830·4	−17·0	− 0·7	10	12	42·17	42·24

Position 1950 + T = Position 1950 + T (1st Term) + T² (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*56 1 m 6 to 2 m 3.

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°			h m s	s	s	s	° ′ ″	″	″	″		
101	+39	378	4·90 B 8	1 37 37·072	+354·19	+ 1·84	+ 0·11	+40 19 29·34	+1825·2	−11·0	− 2·3	6	44·97
102	+ 4	293	4·68 K 0	1 38 49·587	+312·44	+ 0·46	− 0·17	+ 5 14 6·49	+1820·8	− 9·9	+ 0·7	8 24	42·38 40·48
103	− 4	260	5·27 G 5	1 40 11·682	+303·43	+ 0·25	− 0·01	− 3 56 29·46	+1815·8	− 9·8	− 3·2	6 5	48·14 47·99
104	+44	354	6·46 K 0	1 40 13·175	+364·05	+ 2·19	+ 1·35	+45 4 16·18	+1815·7	−11·7	− 1·5	4 5	48·33 48·04
105	−16	295	3·65 K 0	1 41 44·945	+290·65	0·00	−11·92	−16 12 2·35	+1810·0	− 9·5	+85·9	3	47·37
106	+ 8	273	4·50 K 0	1 42 44·867	+316·41	+ 0·57	+ 0·48	+ 8 54 23·39	+1806·2	−10·4	+ 5·4	3 6	36·59 37·46
107	+63	238	5·74 K 0	1 44 6·029	+425·47	+ 5·10	+ 8·76	+63 36 25·08	+1801·0	−14·0	−24·6	8 11	46·49 46·88
108	−14	335	6·76 B 9	1 44 31·955	+292·51	+ 0·05	+ 0·25	−14 8 17·22	+1799·4	− 9·8	+ 0·8	4	45·08
109	−21	300	6·69 K 0	1 45 16·462	+284·47	− 0·08	+ 0·22	−21 5 36·75	+1796·5	− 9·6	− 4·0	6 5	47·57 47·53
110	+16	203	5·73 A 0	1 45 27·891	+325·13	+ 0·80	+ 0·34	+16 42 27·00	+1795·7	−11·0	− 3·0	3 4	41·21 40·92
111	+25	305	6·73 B 8	1 46 38·404	+336·86	+ 1·13	− 0·03	+26 13 29·20	+1791·2	−11·4	− 0·2	5	44·28
112	+74	84	6·92 F 5	1 47 14·869	+537·75	+13·04	+ 1·94	+75 20 34·75	+1788·8	−18·1	− 3·3	6	48·31
113	+88	8	2·12 F 8	1 48 45·465	+3910·65	+1914·97	+17·78	+89 1 43·90	+1782·6	−130·7	− 0·5	14 33	37·61 37·50
114	−11	359	3·92 K 0	1 48 59·429	+295·90	+ 0·13	+ 0·25	−10 34 53·00	+1781·9	−10·2	− 3·3	5 16	39·75 41·43
115	+80	58	7·60 K 0	1 50 11·508	+683·26	+28·04	+ 4·84	+80 39 52·41	+1777·0	−23·4	− 8·3	13 13	46·66 46·25
116	+62	320	3·44 B 3	1 50 46·373	+431·47	+ 5·11	+ 0·40	+63 25 29·69	+1774·6	−15·0	− 1·7	12 18	46·93 47·39
117	+ 2	290	4·84 K 0	1 50 57·820	+310·52	+ 0·43	+ 0·14	+ 2 56 28·73	+1773·9	−10·9	+ 2·8	5 13	41·47 42·56
118	+ 8	292	7·05 M a	1 51 43·554	+316·72	+ 0·57	+ 0·08	+ 8 32 9·09	+1770·8	−11·2	+ 0·4	4	48·35
119	+20	306	2·72 A 5	1 51 52·311	+330·83	+ 0·92	+ 0·68	+20 33 52·70	+1770·2	−11·8	−10·8	5 15	48·29 42·40
120	+67	169	5·03 B 8	1 52 4·836	+466·20	+ 7·12	+ 0·22	+68 26 26·50	+1769·3	−16·4	− 0·8	10 11	45·96 46·08
121	+30	310	7·21 M b	1 55 10·663	+345·83	+ 1·34	− 0·25	+30 53 31·14	+1756·4	−12·5	− 3·6	6	38·53
122	+11	261	6·14 A 2	1 56 44·977	+321·24	+ 0·67	+ 0·02	+12 3 10·99	+1749·8	−11·8	− 3·4	7	42·47
123	+59	376	6·74 A 0	1 57 17·331	+419·38	+ 4·20	+ 0·72	+59 43 5·56	+1747·4	−15·3	− 3·1	4 7	46·80 44·29
124	+ 2	311	5·84 G 0	1 57 32·830	+310·60	+ 0·44	+ 1·54	+ 2 51 32·42	+1746·3	−11·5	−24·5	6	44·66
125	−21	358	4·18 M a	1 57 38·847	+281·72	− 0·05	+ 0·93	−21 19 9·49	+1745·9	−10·4	− 1·6	7	46·59
126	− 9	380	5·72 M b	1 57 57·786	+297·18	+ 0·18	+ 0·63	− 8 45 54·75	+1744·6	−11·1	− 0·5	5 6	45·12 43·92
127	+53	439	4·99 B 8	1 58 57·268	+399·39	+ 3·23	+ 0·37	+54 14 49·24	+1740·3	−14·8	+ 0·3	6	46·65
128	−24	872	6·51 K 0	2 0 33·245	+277·28	− 0·08	− 0·20	−24 7 34·05	+1733·3	−10·5	− 3·4	5 6	44·11 42·78
129	− 0	307	5·56 A 5	2 0 37·556	+307·19	+ 0·38	+ 0·51	− 0 6 43·11	+1733·0	−11·6	+ 2·2	4 5	38·45 39·57
130	+41	395	2·28 K 0	2 0 49·071	+368·05	+ 1·99	+ 0·44	+42 5 27·45	+1732·1	−13·9	− 4·7	5 6	41·93 41·62
131	−18	356	7·30 K 5	2 1 30·991	+285·70	+ 0·02	+ 0·04	−17 45 11·22	+1729·1	−10·9	− 1·3	7	44·71
132	+22	306	2·23 K 2	2 4 20·772	+336·93	+ 1·03	+ 1·38	+23 13 38·02	+1716·4	−13·0	−14·4	5 7	40·96 40·13
133	+37	486	4·77 A 2	2 5 27·507	+360·93	+ 1·69	+ 1·33	+37 37 22·82	+1711·3	−14·0	− 3·8	8 9	40·02 40·77
134	−28	675	7·22 A 5	2 5 53·085	+270·54	− 0·12	+ 0·52	−27 48 30·10	+1709·4	−10·7	− 1·3	2	37·43
135	+34	381	3·08 A 5	2 6 33·478	+355·95	+ 1·54	+ 1·19	+34 45 6·29	+1706·4	−14·0	− 3·8	7	43·96
136	−13	400	7·30 A 0	2 8 20·125	+290·73	+ 0·12	+ 0·03	−13 9 41·47	+1698·2	−11·6	− 1·0	6	42·92
137	+ 7	347	5·74 G 0	2 8 42·526	+317·76	+ 0·58	− 0·95	+ 8 20 12·11	+1696·4	−12·7	−10·9	5 6	42·51 42·10
138	+82	51	6·86 K 0	2 8 51·600	+916·39	+52·2	+ 3·93	+83 19 44·90	+1695·6	+36·0	− 4·1	27 28	47·06 46·86
139	+29	371	5·43 G 0	2 9 27·772	+348·74	+ 1·30	− 0·49	+30 4 11·50	+1692·9	−14·0	− 6·1	6	42·59
140	+43	447	5·08 K 0	2 10 4·459	+376·69	+ 2·14	− 0·21	+43 59 53·19	+1690·0	−15·1	− 1·0	7 8	43·83 44·20
141	+ 8	345	4·54 G 5	2 10 20·771	+318·23	+ 0·59	− 0·16	+ 8 36 47·22	+1688·8	−12·8	− 0·2	9 19	44·45 42·42
142	+24	329	5·64 F 5	2 12 52·212	+341·17	+ 1·10	− 0·66	+24 48 44·53	+1676·8	−14·0	− 7·8	4 5	42·14 41·11
143	+33	395	5·07 G 0	2 13 58·949	+357·06	+ 1·49	+ 9·29	+33 59 48·71	+1671·3	−14·7	−24·0	7	43·04
144	+19	340	5·69 A 0	2 15 20·332	+333·92	+ 0·91	− 0·09	+19 40 14·91	+1664·9	−13·9	+ 0·3	15 27	44·43 43·29
145	+12	315	7·76 A 5	2 15 23·396	+324·78	+ 0·71	− 0·02	+13 11 58·95	+1664·6	−13·6	− 2·6	6	45·64
146	+ 1	410	5·82 F 8	2 15 25·230	+309·30	+ 0·42	+ 2·43	+ 1 31 17·67	+1664·4	−12·9	+38·1	5	43·85
147	+46	552	5·12 A 0	2 16 2·447	+387·90	+ 2·40	− 0·58	+47 9 1·87	+1661·4	−16·1	− 0·2	8 9	47·46 47·49
148	− 1	322	5·62 A 5	2 19 39·392	+305·85	+ 0·37	− 0·16	− 1 6 41·29	+1643·5	−13·1	− 4·9	10	38·22
149	−18	409	5·99 K 0	2 19 43·520	+282·63	+ 0·07	+ 0·12	−17 53 19·57	+1643·2	−12·2	− 5·1	9 9	42·05 41·70
150	−26	857	6·58 K 0	2 22 5·289	+269·34	− 0·04	+ 0·19	−26 4 24·68	+1631·2	−11·8	+ 3·0	5 6	45·63 44·19

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
151	−20	455	6·05	K 0	2	24	15·675	+278·28	+ 0·05	+ 0·54	−20	16	6·57	+1620·2	−12·4	+10·4	6		44·07	
152	+29	417	5·38	F 0	2	25	13·662	+351·99	+ 1·26	− 0·15	+29	26	50·44	+1615·2	−15·5	− 8·3	6	7	40·46	40·26
153	+ 7	388	4·34	A 0	2	25	29·791	+318·80	+ 0·59	+ 0·25	+ 8	14	12·89	+1613·8	−14·2	− 0·3	16	32	45·34	42·99
154	+ 8	385	6·30	K 0	2	26	54·903	+320·48	+ 0·62	− 0·10	+ 9	20	36·10	+1606·4	−14·3	+ 1·5	6		42·07	
155	+19	365	6·14	F 0	2	27	49·813	+335·98	+ 0·90	+ 0·57	+19	38	3·59	+1601·5	−15·1	− 3·6	7		42·66	
156	+35	497	5·35	K 0	2	29	2·498	+365·95	+ 1·58	+ 0·37	+35	55	35·69	+1595·2	−16·5	+ 1·8	7		37·85	
157	+10	340	7·00	A 0	2	31	43·643	+323·87	+ 0·66	+ 0·17	+11	23	11·96	+1580·8	−14·8	− 4·5	8	9	41·89	42·24
158	+51	599	7·34	*	2	33	21·263	+412·45	+ 2·89	+ 0·04	+51	44	39·14	+1572·1	−19·0	− 0·7	6	7	39·33	39·01
159	− 8	489	5·71	K 5	2	33	32·266	+295·60	+ 0·26	− 0·25	− 8	2	53·36	+1571·1	−13·7	− 5·5	6	7	43·50	43·00
160	+61	448	7·28	A 0	2	36	5·466	+468·16	+ 4·92	+ 0·30	+62	23	15·37	+1557·1	−21·8	− 1·5	6	9	45·87	45·85
161	− 0	406	4·04	B 2	2	36	54·996	+307·49	+ 0·42	+ 0·07	+ 0	6	49·90	+1552·6	−14·5	+ 0·3	14	27	45·11	42·44
162	−16	484	7·30	A 2	2	37	39·463	+282·16	+ 0·13	+ 0·15	−16	31	21·28	+1548·4	−13·4	+ 0·2	6		44·34	
163	+58	504	7·18	F 5	2	37	55·838	+447·42	+ 4·02	+ 0·52	+58	45	51·18	+1546·9	−21·1	− 0·9	4	5	47·62	45·50
164	+47	683	6·56	G 5	2	39	39·806	+402·73	+ 2·46	+ 0·07	+48	3	11·04	+1537·3	−19·2	+ 0·3	5	6	40·63	41·20
165	+80	86	5·92	K 0	2	40	25·579	+865·91	+34·64	+ 0·70	+81	14	22·60	+1533·0	−41·0	− 6·8	13	13	43·49	43·26
166	+48	746	4·22	F 8	2	40	46·066	+406·59	+ 2·56	+ 3·44	+49	1	7·09	+1531·0	−19·5	− 8·4	6		43·65	
167	+43	566	5·58	G 5	2	40	49·123	+390·87	+ 2·10	+ 0·03	+44	5	8·55	+1530·7	−18·7	− 0·6	5		38·60	
168	− 3	426	6·64	K 0	2	40	57·043	+303·19	+ 0·36	+ 0·14	− 2	44	35·28	+1530·0	−14·6	+ 0·7	5		43·65	
169	−26	996	6·87	G 0	2	42	1·181	+265·54	+ 0·02	+ 1·23	−25	42	25·20	+1524·0	−12·9	+ 6·1	3		47·43	
170	+ 9	359	4·36	F 0	2	42	14·038	+322·50	+ 0·63	+ 1·90	+ 9	54	15·33	+1522·7	−15·6	− 3·0	9	14	46·35	43·59
171	+35	553	6·38	G 5	2	43	52·378	+370·45	+ 1·55	+ 0·42	+35	46	28·66	+1513·3	−18·0	− 0·4	6	7	44·76	43·94
172	+69	179	*	A 0	2	44	22·762	+541·31	+ 7·92	+ 0·08	+69	25	32·52	+1510·4	−26·2	+ 3·7	12		46·62	
173	−22	479	6·49	F 5	2	44	28·650	+272·10	+ 0·08	+ 0·66	−21	50	55·03	+1509·9	−13·3	+ 1·4	5		41·29	
174	−13	530	*	M b	2	45	32·087	+287·47	+ 0·20	+ 0·05	−12	40	4·27	+1503·7	−14·2	− 3·4	5	6	41·70	40·92
175	+17	442	6·04	K 0	2	45	43·539	+336·18	+ 0·84	+ 0·32	+18	4	36·06	+1502·7	−16·6	− 3·5	8		42·28	
176	− 5	541	7·30	K 0	2	52	9·320	+298·50	+ 0·32	+ 0·13	− 5	31	59·18	+1464·9	−15·2	− 1·6	7		39·12	
177	+14	492	7·70	A 0	2	52	54·599	+331·00	+ 0·74	− 0·17	+14	30	18·62	+1460·4	−16·8	− 2·4	5	6	43·51	42·43
178	+72	153	7·92	G 5	2	53	21·208	+597·70	+10·29	+ 0·76	+72	28	21·97	+1457·7	−30·2	− 1·7	12		44·23	
179	+ 7	450	6·08	F 8	2	53	33·063	+320·53	+ 0·58	+ 0·45	+ 8	10	53·64	+1456·6	−16·4	− 8·4	6	7	46·00	45·01
180	− 9	553	4·05	K 0	2	53	58·936	+292·60	+ 0·26	+ 0·53	− 9	5	43·82	+1453·9	−15·0	−21·4	4	7	40·41	40·66
181	+ 3	410	6·31	M a	2	54	27·190	+314·26	+ 0·50	+ 0·05	+ 4	18	0·80	+1451·1	−16·1	+ 2·5	4	5	45·10	45·68
182	+20	480	5·85	F 0	2	55	13·132	+341·85	+ 0·90	+ 1·65	+20	28	9·64	+1446·5	−17·5	− 2·8	4		46·63	
183	+ 3	419	2·82	M a	2	59	39·762	+313·74	+ 0·49	− 0·06	+ 3	53	41·06	+1419·3	−16·4	− 7·3	8	11	48·78	45·78
184	−18	516	7·40	F 0	2	59	44·581	+275·93	+ 0·14	− 0·17	−18	24	11·36	+1418·8	−14·5	− 2·2	6		47·48	
185	+52	654	3·08	*	3	1	9·579	+434·78	+ 2·97	+ 0·01	+53	18	43·99	+1410·1	−22·8	− 0·2	6		46·41	
186	− 2	554	7·10	G 5	3	4	40·766	+303·97	+ 0·38	− 0·15	− 1	59	38·45	+1388·0	−16·2	− 2·8	7		41·33	
187	+40	673	*	B 8	3	4	54·332	+390·50	+ 1·77	+ 0·06	+40	45	52·07	+1386·6	−20·8	+ 0·3	9	11	43·30	42·34
188	−14	604	7·16	G 0	3	4	56·851	+283·36	+ 0·20	+ 0·06	−13	56	59·12	+1386·3	−15·2	−25·3	5	4	47·50	47·61
189	+49	857	4·17	G 0	3	5	26·055	+420·24	+ 2·48	+12·97	+49	25	27·06	+1383·1	−22·4	− 7·7	7		45·00	
190	+18	414	6·48	K 5	3	5	30·746	+339·89	+ 0·83	+ 0·34	+18	36	16·16	+1382·7	−18·2	− 1·5	5	5	43·33	42·58
191	+28	499	5·60	B 9	3	6	35·794	+360·93	+ 1·17	+ 0·15	+28	53	14·49	+1375·8	−19·4	− 1·0	2	3	43·38	41·27
192	+52	663	7·50	A 5	3	7	21·173	+436·45	+ 2·88	− 0·06	+52	57	17·01	+1371·0	−23·5	− 0·6	3	4	48·52	47·66
193	+31	553	7·38	K 0	3	7	47·508	+368·44	+ 1·30	+ 0·35	+32	2	16·77	+1368·3	−20·0	− 1·9	3		44·36	
194	+19	477	4·53	K 0	3	8	45·842	+342·11	+ 0·86	+ 1·07	+19	32	20·14	+1362·0	−18·6	− 0·5	7	22	44·89	41·53
195	+41	631	6·00	B 8	3	8	50·834	+396·21	+ 1·85	+ 0·27	+42	11	18·88	+1361·4	−21·5	− 1·2	4	6	48·06	44·88
196	+47	779	6·42	K 0	3	8	58·064	+414·54	+ 2·28	+ 0·73	+47	32	23·30	+1360·7	−22·4	− 7·7	5	5	44·70	42·51
197	+ 6	496	5·84	*	3	9	46·917	+318·49	+ 0·54	− 0·05	+ 6	28	25·70	+1355·4	−17·4	0·0	6		45·54	
198	+56	798	5·92	A 0p	3	11	57·088	+459·95	+ 3·44	− 0·01	+56	57	21·91	+1341·5	−25·2	+ 0·6	7	8	41·39	40·85
199	+38	690	5·97	A 0	3	14	30·721	+388·82	+ 1·62	+ 0·23	+39	6	4·45	+1324·7	−21·6	− 1·4	7		41·34	
200	+12	460	7·64	B 8	3	15	29·962	+329·90	+ 0·66	+ 0·01	+12	38	31·97	+1318·2	−18·4	+ 0·3	6	7	38·62	39·41

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*158 G5 + A5 *172 6m3 to 7m8 *174 6m3 to 7m7 *185 F5 + A3 *197 G5 + A5

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
201	−19	651	5·83	F 0	3	16	23·998	+273·06	+ 0·16	+ 0·96	−18	44	24·49	+1312·3	−15·4	− 4·9	7		40·53	
202	+84	59	5·78	K 0	3	20	5·899	+1419·53	+86·02	+ 5·64	+84	44	24·01	+1287·6	−79·6	−13·0	77	75	45·04	44·84
203	−26	1257	6·26	A 0	3	20	7·213	+257·90	+ 0·11	+ 0·14	−25	45	56·63	+1287·5	−14·7	+ 0·8	6		42·90	
204	+64	391	5·55	K 2	3	20	18·609	+521·29	+ 5·16	− 0·13	+64	24	34·06	+1286·2	−29·4	+ 0·4	12	17	41·07	41·88
205	+49	917	1·90	F 5	3	20	44·454	+428·29	+ 2·40	+ 0·30	+49	41	6·64	+1283·3	−24·3	− 2·2	5	6	45·69	44·76
206	+ 8	511	3·80	G 5	3	22	7·177	+323·39	+ 0·57	− 0·45	+ 8	51	15·63	+1274·1	−18·4	− 7·1	5	15	41·75	38·94
207	− 4	586	7·41	G 5	3	22	39·870	+298·91	+ 0·34	+ 0·30	− 4	39	16·56	+1270·4	−17·2	+ 6·1	6		42·39	
208	+19	537	7·0	A 3	3	25	8·195	+345·87	+ 0·84	+ 0·07	+20	17	29·47	+1253·6	−20·0	− 0·3	6	8	44·06	44·20
209	−11	667	5·85	K 0	3	25	37·767	+286·16	+ 0·25	+ 0·01	−11	27	30·48	+1250·2	−16·6	− 4·6	5	6	43·92	43·12
210	+29	566	7·06	B 3	3	25	42·228	+368·13	+ 1·15	− 0·13	+30	12	12·99	+1249·7	−21·2	− 0·5	5	6	42·39	41·50
211	−23	1412	6·84	F 5	3	27	23·995	+261·32	+ 0·14	+ 0·64	−23	38	49·33	+1238·1	−15·2	+ 3·5	6	6	45·95	45·83
212	+12	486	4·28	K 0	3	28	6·478	+331·20	+ 0·64	+ 0·15	+12	46	0·15	+1233·2	−19·3	+ 0·3	15	37	44·72	41·65
213	+34	674	5·80	B 3	3	29	28·526	+382·23	+ 1·35	− 0·07	+35	17	35·78	+1223·7	−22·3	+ 0·4	5		44·55	
214	+ 8	528	5·64	B 8	3	29	53·383	+324·50	+ 0·56	+ 0·22	+ 9	12	21·01	+1220·9	−19·0	− 4·2	6		43·81	
215	− 9	697	3·81	K 0	3	30	35·031	+289·31	+ 0·27	− 6·60	− 9	37	35·16	+1216·2	−17·0	+ 2·1	4	15	40·26	39·44
216	−22	628	4·32	B 8	3	31	34·663	+264·71	+ 0·15	+ 0·30	−21	47	58·23	+1209·1	−15·7	− 2·5	5		43·86	
217	−17	699	5·32	A 0p	3	34	0·566	+273·18	+ 0·19	+ 0·17	−17	37	52·86	+1192·2	−16·3	− 0·5	7	9	44·23	43·54
218	+22	518	6·69	A 0p	3	34	1·298	+353·03	+ 0·88	− 0·08	+23	2	49·65	+1192·0	−20·9	− 2·2	6		39·69	
219	+ 0	616	6·12	G 0	3	34	13·204	+308·13	+ 0·41	− 0·17	+ 0	25	34·54	+1190·6	−18·3	−16·0	6		38·55	
220	+13	579	6·89	G 5	3	36	29·887	+333·78	+ 0·64	+ 0·09	+13	43	52·48	+1174·5	−20·0	− 9·0	6	8	40·31	41·38
221	− 6	713	6·00	G 5	3	36	32·868	+296·35	+ 0·32	− 0·09	− 5	47	5·48	+1174·2	−17·8	−20·1	6	7	41·69	41·32
222	+40	813	7·08	F 2	3	37	34·870	+401·86	+ 1·61	− 0·30	+41	1	36·49	+1166·8	−24·0	+ 8·1	6		39·82	
223	+47	876	3·10	B 5	3	39	21·247	+427·08	+ 2·05	+ 0·31	+47	37	46·02	+1154·2	−25·8	− 3·2	7	7	43·38	41·40
224	−10	728	3·72	K 0	3	40	51·049	+288·11	+ 0·28	− 0·63	− 9	55	58·08	+1143·4	−17·5	+74·6	6	22	46·18	43·46
225	+45	804	6·09	A 5	3	41	9·945	+420·85	+ 1·90	− 0·04	+45	56	36·17	+1141·2	−25·4	− 3·7	6		44·58	
226	−10	729	5·70	A 0	3	41	10·400	+286·69	+ 0·26	− 0·10	−10	38	34·06	+1141·2	−17·4	− 1·4	5		47·80	
227	+66	284	5·84	F 2	3	41	15·331	+566·76	+ 5·74	+ 1·68	+67	2	50·52	+1140·6	−34·2	−10·9	10	9	45·65	45·33
228	+36	742	5·57	A 2	3	41	16·750	+388·05	+ 1·33	+ 0·40	+36	18	14·17	+1140·4	−23·6	− 3·5	3		41·10	
229	+27	556	6·71	F 0	3	41	34·478	+365·17	+ 1·00	− 0·22	+27	44	31·41	+1138·3	−22·1	− 7·3	3		43·98	
230	+23	541	2·96	B5p	3	44	30·406	+356·61	+ 0·87	+ 0·15	+23	57	7·26	+1117·0	−21·8	− 4·4	6	7	45·50	45·30
231	−23	1565	4·33	F 8	3	44	41·760	+259·30	+ 0·16	− 1·16	−23	23	43·94	+1115·7	−15·9	−52·4	3		46·05	
232	− 0	602	6·10	K 0	3	46	4·851	+307·48	+ 0·40	+ 0·39	+ 0	4	31·86	+1105·6	−19·0	− 0·4	6	5	45·79	46·32
233	−21	703	6·06	K 0	3	46	33·536	+264·38	+ 0·17	− 0·10	−21	3	18·31	+1103·3	−16·3	− 2·1	5		46·65	
234	+ 6	594	5·62	B 9	3	49	20·088	+319·91	+ 0·48	+ 0·07	+ 6	23	9·55	+1081·8	−19·8	− 0·4	3		45·72	
235	+57	752	5·79	A 0	3	49	38·763	+486·31	+ 3·12	+ 1·06	+57	49	43·48	+1079·4	−30·1	− 9·8	2	4	48·40	46·48
236	+16	523	5·96	F 0	3	50	18·159	+342·19	+ 0·68	+ 1·00	+17	10	45·88	+1074·7	−21·4	− 2·7	5		44·06	
237	− 7	695	6·55	B 9	3	50	41·304	+293·90	+ 0·30	− 0·05	− 6	46	53·45	+1071·8	−18·4	+ 0·1	4		47·81	
238	+31	666	2·91	B 1	3	50	58·971	+377·21	+ 1·09	+ 0·07	+31	44	12·52	+1069·6	−23·5	− 1·0	3		44·76	
239	+86	51	5·84	F 5	3	51	14·342	+2150·39	+168·41	+16·77	+86	29	20·37	+1067·5	−132·8	− 7·5	90	85	37·82	37·88
240	+30	591	*	B0p	3	52	15·197	+375·19	+ 1·05	− 0·07	+30	54	0·32	+1060·2	−23·4	− 0·7	6	5	44·28	45·89
241	+ 2	628	7·40	K 0	3	54	0·872	+313·12	+ 0·42	+ 0·22	+ 2	54	49·14	+1047·1	−19·7	0·0	6		43·27	
242	+24	599	6·38	K 0	3	54	26·677	+358·87	+ 0·84	+ 0·03	+24	19	7·22	+1043·9	−22·6	− 1·1	8	7	43·59	43·59
243	+39	895	2·96	B 1	3	54	29·373	+402·60	+ 1·41	+ 0·18	+39	52	2·79	+1043·6	−25·3	− 2·6	5	7	40·02	39·75
244	−13	781	3·19	K 5	3	55	41·598	+279·53	+ 0·24	+ 0·43	−13	38	57·58	+1034·5	−17·6	−10·8	5	18	41·57	41·59
245	+13	621	7·33	G 5	3	56	31·763	+335·57	+ 0·60	− 0·02	+13	50	3·66	+1028·3	−21·2	− 6·2	5	6	42·15	41·98
246	+12	539	*	B 3	3	57	54·409	+332·53	+ 0·56	− 0·04	+12	21	2·17	+1017·9	−21·1	− 1·1	6	19	40·48	40·36
247	+ 5	581	3·94	A 0	4	0	29·583	+319·20	+ 0·46	+ 0·01	+ 5	51	7·14	+ 998·4	−20·4	+ 0·1	13	36	41·52	41·01
248	+73	210	6·72	K 0	4	1	13·701	+708·59	+ 9·52	+ 0·65	+73	52	0·15	+ 992·8	−45·1	− 6·6	16	15	43·37	43·17
249	+61	669	6·75	B 2	4	1	44·297	+525·59	+ 3·68	− 0·06	+61	58	0·67	+ 988·9	−33·5	+ 0·2	11	14	46·23	46·08
250	−13	806	5·67	G 5	4	2	2·236	+280·63	+ 0·24	+ 0·06	−12	55	43·06	+ 986·7	−18·0	+ 1·6	4	5	38·31	38·07

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*240 6^m0 to 6^m6 *246 3^m8 to 4^m1

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
251	+42	897	6·67	B 8	4	4	44·284	+416·72	+ 1·50	+ 0·07	+43	3	32·05	+ 966·1	−26·8	− 2·0	5	8	39·06	38·81
252	−22	754	6·58	A 3	4	4	48·125	+259·72	+ 0·18	+ 0·05	−22	7	37·24	+ 965·5	−16·8	− 1·2	8	7	39·51	39·86
253	+37	882	5·59	F 8	4	5	16·065	+398·62	+ 1·24	+ 1·42	+37	54	40·26	+ 961·9	−25·6	−20·0	9		39·47	
254	− 3	696	6·80	A 0	4	7	19·132	+299·70	+ 0·32	+ 0·04	− 3	42	12·86	+ 946·2	−19·4	+ 0·1	7		38·03	
255	+ 5	601	5·71	F 0	4	8	40·277	+318·49	+ 0·43	+ 1·00	+ 5	23	38·99	+ 935·7	−20·8	+ 1·1	8		38·93	
256	− 7	764	4·14	F 2	4	9	25·335	+292·86	+ 0·29	+ 0·06	− 6	58	0·67	+ 929·9	−19·1	+ 8·6	7	27	45·11	42·21
257	−17	816	6·58	K 0	4	9	44·953	+270·20	+ 0·20	+ 0·02	−17	24	5·34	+ 927·4	−17·6	− 4·0	6		45·98	
258	+48	1059	7·28	G 5	4	9	58·757	+443·50	+ 1·82	+ 0·15	+48	58	2·85	+ 925·7	−28·9	− 0·1	10		44·15	
259	+53	750	5·12	A 2	4	12	48·419	+468·44	+ 2·18	− 0·10	+53	29	18·12	+ 903·6	−30·6	− 0·1	6	5	39·23	39·67
260	+21	618	5·56	A 5	4	15	25·317	+354·48	+ 0·68	+ 0·70	+21	27	31·30	+ 883·1	−23·4	− 3·5	5	6	43·87	44·41
261	+83	104	5·39	B 3	4	16	24·213	+1394·78	+47·78	− 0·55	+83	41	32·93	+ 875·5	−91·6	+ 1·3	9		46·08	
262	+15	612	3·86	K 0	4	16	56·660	+340·72	+ 0·56	+ 0·81	+15	30	30·63	+ 871·1	−22·6	− 2·3	4	7	48·71	48·00
263	+14	682	5·27	F 0	4	17	45·957	+339·58	+ 0·55	+ 0·76	+14	58	37·00	+ 864·7	−22·5	− 2·3	4		46·45	
264	−16	838	6·65	B 9	4	17	53·090	+271·49	+ 0·20	+ 0·16	−16	33	21·27	+ 863·8	−18·0	− 0·4	2		47·00	
265	− 7	798	5·72	B 8	4	18	17·245	+290·99	+ 0·27	+ 0·02	− 7	42	38·28	+ 860·6	−19·4	− 0·4	2	3	47·72	44·14
266	+85	63	6·70	F 8	4	19	53·486	+1817·91	+85·38	+ 1·78	+85	25	2·80	+ 847·9	−120·2	+ 2·8	123	122	39·40	39·78
267	+17	712	3·93	K 0	4	20	3·	+345·34	+ 0·58	+ 0·76	+17	25	37·25	+ 846·7	−23·0	− 2·7	0	4		43·58
268	− 4	818	5·23	A 2	4	21	11·348	+299·13	+ 0·30	− 0·36	− 3	51	34·69	+ 837·6	−20·0	− 5·5	5	6	40·97	41·98
269	+57	800	6·23	A 0	4	22	50·983	+498·31	+ 2·46	+ 0·18	+57	28	23·61	+ 824·4	−33·3	− 1·8	7	8	40·88	40·41
270	+ 8	687	5·99	B 5	4	23	38·189	+325·51	+ 0·43	+ 0·02	+ 8	28	41·54	+ 818·0	−21·8	− 1·4	8		41·39	
271	+ 1	753	6·37	K 0	4	24	24·518	+311·53	+ 0·35	+ 0·44	+ 1	58	7·57	+ 811·9	−20·9	− 4·4	4	5	43·29	42·85
272	+69	258	7·02	K 0	4	24	35·313	+630·21	+ 5·22	+ 0·16	+69	16	8·92	+ 810·5	−42·2	− 3·0	10	13	41·66	42·61
273	+18	640	3·63	K 0	4	25	41·548	+349·66	+ 0·58	+ 0·77	+19	4	16·74	+ 801·7	−23·6	− 3·4	9	41	41·95	40·10
274	−21	878	6·73	F 5	4	25	45·892	+258·80	+ 0·18	− 0·09	−21	36	48·71	+ 801·1	−17·4	− 3·5	2	3	45·08	45·74
275	+27	661	6·61	A 0	4	26	14·269	+370·59	+ 0·75	+ 0·14	+27	17	43·89	+ 797·2	−25·0	− 2·2	3		43·36	
276	+15	639	5·49	A 5	4	27	47·482	+341·62	+ 0·52	+ 0·73	+15	35	5·66	+ 784·8	−23·1	− 2·4	7	8	42·61	42·80
277	+36	907	6·82	F 5	4	28	56·817	+399·96	+ 1·00	+ 0·23	+36	56	14·61	+ 775·5	−27·1	− 1·4	7		39·59	
278	+16	629	1·06	K 5	4	33	2·855	+343·88	+ 0·51	+ 0·47	+16	24	39·58	+ 742·3	−23·4	−18·8	2	33	43·51	40·50
279	+ 0	798	5·32	B 5	4	34	38·906	+309·28	+ 0·32	− 0·03	+ 0	53	54·38	+ 729·3	−21·2	− 0·3	5	6	37·26	38·40
280	− 2	963	5·31	A 5	4	35	4·986	+301·74	+ 0·28	+ 0·28	− 2	34	19·35	+ 725·8	−20·7	− 5·8	7		43·72	
281	+20	785	5·73	B 9	4	35	18·631	+354·12	+ 0·56	− 0·10	+20	35	9·29	+ 723·9	−24·2	− 0·7	7	8	43·28	42·39
282	−18	883	7·73	K 0	4	35	50·614	+267·01	+ 0·19	− 0·90	−17	54	52·42	+ 719·4	−18·3	− 4·4	4		44·93	
283	+11	639	5·37	B 9	4	37	16·212	+334·13	+ 0·44	0·00	+12	6	3·62	+ 707·9	−23·0	− 0·9	10		38·85	
284	+76	174	6·51	F 5	4	39	1·784	+830·34	+ 9·69	+ 2·10	+76	31	15·08	+ 693·5	−56·7	−13·2	16	17	41·85	41·78
285	+22	739	4·33	B 5	4	39	14·383	+360·20	+ 0·58	− 0·01	+22	51	45·98	+ 691·7	−24·8	− 1·5	7		40·65	
286	+43	1043	5·25	A 0	4	39	21·056	+425·41	+ 1·13	+ 0·39	+43	16	19·14	+ 690·8	−29·2	− 5·1	8		39·20	
287	+49	1230	5·77	B 8	4	39	33·082	+456·23	+ 1·47	− 0·02	+49	52	49·58	+ 689·2	−31·4	− 1·9	6		42·39	
288	+32	827	6·45	A 3	4	40	34·088	+388·23	+ 0·78	− 0·24	+32	46	24·48	+ 680·8	−26·7	− 4·4	7	6	39·10	39·44
289	− 8	929	5·87	B 5	4	41	41·065	+288·30	+ 0·24	− 0·03	− 8	35	43·65	+ 671·6	−20·0	0·0	6		42·44	
290	−21	966	6·03	K 2	4	42	55·007	+257·96	+ 0·18	+ 0·13	−21	22	25·63	+ 661·4	−17·9	− 2·2	5		45·41	
291	− 3	876	4·18	B 5	4	43	0·004	+299·95	+ 0·27	+ 0·09	− 3	20	41·25	+ 660·8	−20·8	− 1·0	10	33	41·21	40·38
292	+55	928	6·34	F 0	4	44	0·347	+491·26	+ 1·82	+ 0·94	+55	30	57·09	+ 652·5	−34·0	−10·2	6		44·94	
293	+29	741	7·36	B 9	4	45	12·742	+379·48	+ 0·68	+ 0·09	+29	49	9·72	+ 642·4	−26·4	− 3·5	6	9	36·87	37·95
294	−14	970	6·30	F 2	4	47	24·628	+276·01	+ 0·20	− 0·79	−13	51	8·15	+ 624·3	−19·2	−16·3	7	11	40·09	38·82
295	+61	739	6·63	A 2	4	49	8·542	+540·78	+ 2·33	+ 0·34	+61	24	1·41	+ 609·8	−37·7	− 3·9	10	13	41·76	41·77
296	+80	155	5·32	K 0	4	50	54·548	+1123·65	+18·00	0·00	+81	6	58·89	+ 595·1	−78·4	+ 2·9	14	15	42·21	42·57
297	+ 2	810	3·87	B 3	4	51	38·668	+312·59	+ 0·30	− 0·03	+ 2	21	37·04	+ 589·0	−21·9	+ 0·3	3	22	41·42	40·97
298	+ 7	755	5·54	K 0	4	52	5·408	+324·60	+ 0·34	− 0·13	+ 7	41	59·27	+ 585·3	−22·8	− 3·2	6		44·16	
299	−16	992	5·82	K 0	4	53	3·797	+269·43	+ 0·19	+ 0·05	−16	29	50·63	+ 577·0	−19·0	+ 4·8	4	3	45·13	47·82
300	− 5	1091	5·46	B 9	4	53	56·312	+295·56	+ 0·24	− 0·05	− 5	14	56·98	+ 569·8	−20·8	− 0·5	1	3	37·03	40·43

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
301	+23 777	5·99 K 0	4 54 46·398	+364·09	+ 0·51	+ 0·09	+23 52 19·24	+ 562·7	−25·6	− 0·8	4 5	42·12 42·72
302	+37 1005	4·99 A 0	4 55 51·441	+407·00	+ 0·78	+ 0·38	+37 49 0·40	+ 553·6	−28·6	−10·2	5	41·83
303	+ 1 872	4·73 K 0	4 55 57·287	+311·00	+ 0·28	− 0·01	+ 1 38 19·49	+ 552·8	−21·9	− 0·2	7	42·10
304	+14 796	5·98 B 8	4 56 9·002	+340·47	+ 0·38	+ 0·05	+14 28 6·51	+ 551·2	−24·0	− 1·9	7 7	41·79 40·21
305	+43 1166	* F5p	4 58 22·530	+430·65	+ 0·92	+ 0·04	+43 45 5·46	+ 532·5	−30·4	− 0·6	10	39·32
306	+41 1044	6·20 A 0	4 59 47·905	+420·97	+ 0·82	+ 0·05	+41 22 17·26	+ 520·5	−29·8	− 0·5	6 8	39·93 39·36
307	+21 751	4·70 A 5	5 0 6·164	+358·22	+ 0·44	+ 0·47	+21 31 13·67	+ 517·9	−25·3	− 4·0	8 9	40·97 41·44
308	+58 804	5·31 B3p	5 1 47·128	+521·76	+ 1·70	0·00	+58 54 18·46	+ 503·6	−36·9	− 0·7	6	38·26
309	−24 2795	5·55 A 2	5 1 48·817	+248·51	+ 0·16	+ 0·17	−24 27 22·68	+ 503·4	−17·6	− 2·8	5 6	44·39 43·52
310	− 3 998	5·98 B 5	5 2 24·253	+300·30	+ 0·23	0·00	− 3 6 26·77	+ 498·4	−21·3	+ 0·2	6	42·89
311	+33 953	6·94 B 8	5 2 51·003	+394·18	+ 0·62	+ 0·04	+33 51 7·98	+ 494·6	−28·0	− 0·6	6 7	42·27 41·40
312	−22 1000	3·29 K 5	5 3 20·567	+253·83	+ 0·16	+ 0·18	−22 26 12·85	+ 490·4	−18·0	− 6·9	5	42·60
313	−12 1076	6·14 F 8	5 5 5·157	+278·42	+ 0·18	+ 0·95	−12 33 15·69	+ 475·6	−19·8	− 7·8	4	43·18
314	− 5 1162	2·92 A 3	5 5 23·390	+295·63	+ 0·21	− 0·64	− 5 8 58·35	+ 473·1	−21·0	− 7·7	9 30	46·02 42·75
315	+19 853	6·55 G 5	5 5 53·261	+354·09	+ 0·40	+ 0·06	+19 47 48·33	+ 468·8	−25·2	− 1·5	4	37·88
316	+73 274	5·38 A0p	5 6 2·705	+757·07	+ 4·88	+ 0·21	+73 53 9·31	+ 467·5	−54·0	− 3·3	11 13	41·38 42·18
317	+ 9 743	5·42 A 2	5 6 34·416	+329·71	+ 0·30	+ 0·41	+ 9 46 1·08	+ 463·0	−23·4	− 0·3	6 7	42·20 41·62
318	+27 732	5·97 A 3	5 6 36·499	+376·36	+ 0·50	+ 0·43	+27 58 8·96	+ 462·7	−26·8	− 6·6	5	40·34
319	+46 970	5·59 F 5	5 6 59·125	+446·33	+ 0·90	+ 0·59	+46 54 10·61	+ 459·5	−31·8	−15·0	6	42·45
320	+67 371	7·12 A 0	5 8 56·568	+620·76	+ 2·58	+ 0·08	+67 25 27·47	+ 442·8	−44·2	− 6·6	15	42·47
321	− 8 1059	6·16 A 0	5 11 8·941	+288·49	+ 0·19	+ 0·01	− 8 12 18·40	+ 424·0	−20·6	+ 0·2	9 8	40·44 40·86
322	− 8 1063	0·34 B8p	5 12 7·991	+288·36	+ 0·19	+ 0·02	− 8 15 29·04	+ 415·6	−20·6	− 0·1	9 25	45·68 41·50
323	+45 1077	0·21 G 0	5 12 59·362	+442·55	+ 0·78	+ 0·81	+45 57 2·85	+ 408·3	−31·7	−42·3	7 8	38·85 38·89
324	+85 74	6·54 A 5	5 13 49·893	+2131·29	+53·40	+ 2·34	+85 53 40·90	+ 401·1	−152·2	− 8·2	35 34	45·18 45·21
325	− 7 1028	3·68 B 5	5 15 10·606	+291·47	+ 0·19	− 0·11	− 6 53 49·44	+ 389·5	−20·9	− 0·8	5 27	43·19 41·14
326	+21 816	5·14 K 0	5 16 16·181	+360·46	+ 0·36	+ 0·10	+22 2 48·60	+ 380·1	−25·9	− 8·3	5 6	38·51 38·44
327	+ 2 916	5·45 F 5	5 16 34·607	+313·16	+ 0·22	− 0·11	+ 2 32 44·37	+ 373·5	−22·5	− 4·6	6	38·96
328	−18 1051	5·93 G 0	5 16 36·812	+264·22	+ 0·16	+ 2·68	−18 10 55·04	+ 377·2	−19·0	+ 6·2	4 5	45·75 44·82
329	+54 882	6·75 G 5	5 17 12·410	+489·39	+ 1·01	− 0·01	+54 12 10·09	+ 372·0	−35·2	+ 3·0	6	45·32
330	+10 758	7·44 A 0	5 17 38·143	+332·48	+ 0·26	− 0·08	+10 50 28·39	+ 368·4	−23·9	− 2·7	6	38·97
331	+ 8 933	5·71 B 2	5 19 0·091	+326·70	+ 0·24	+ 0·01	+ 8 22 49·66	+ 356·6	−23·5	+ 0·2	8 10	38·98 39·41
332	+70 351	7·04 B 9	5 21 9·862	+672·85	+ 2·48	+ 0·38	+70 11 6·35	+ 338·0	−48·4	− 2·5	14 15	44·50 44·58
333	+37 1175	5·22 K 5	5 21 15·039	+407·82	+ 0·50	+ 0·03	+37 20 26·56	+ 337·2	−29·4	− 1·0	7	40·53
334	+ 6 919	1·70 B 2	5 22 26·813	+321·89	+ 0·22	− 0·06	+ 6 18 21·76	+ 327·0	−23·2	− 1·5	6 54	45·27 40·42
335	+28 795	1·78 B 8	5 23 7·742	+379·13	+ 0·37	+ 0·20	+28 34 2·38	+ 321·1	−27·4	−17·6	4 3	46·27 44·65
336	+17 928	5·31 B 3	5 24 14·945	+350·01	+ 0·28	+ 0·04	+17 55 15·17	+ 311·4	−25·3	− 2·4	6	43·02
337	−12 1169	6·37 F 5	5 24 45·904	+279·41	+ 0·16	+ 0·08	−11 56 29·63	+ 307·0	−20·2	− 4·8	4 6	38·35 39·94
338	−21 1174	6·14 K 0	5 25 28·597	+255·51	+ 0·14	+ 0·09	−21 25 1·00	+ 300·8	−18·5	+ 3·8	4 5	46·30 44·87
339	− 0 960	6·58 B 9	5 25 52·066	+307·28	+ 0·19	− 0·09	− 0 1 10·07	+ 297·4	−22·2	− 1·6	7 8	38·24 38·60
340	+29 909	6·24 F 5	5 26 29·876	+381·05	+ 0·34	+ 0·20	+29 8 55·07	+ 291·9	−27·6	− 5·6	5 7	38·92 39·12
341	+85 78	6·55 A 0	5 26 41·420	+2040·62	+34·62	− 0·82	+85 38 17·05	+ 290·2	−147·2	+ 0·4	7 8	44·39 43·92
342	+41 1206	6·09 K 0	5 27 16·452	+424·03	+ 0·48	− 0·14	+41 25 30·18	+ 285·2	−30·6	− 4·2	6	39·14
343	− 0 983	2·48 B 0	5 29 27·039	+306·55	+ 0·18	0·00	− 0 20 04·69	+ 266·4	−22·2	+ 0·1	8 48	44·30 41·15
344	−17 1166	2·69 F 0	5 30 31·379	+264·64	+ 0·14	+ 0·02	−17 51 24·12	+ 257·1	−19·2	+ 0·4	6 7	44·33 43·16
345	+ 3 964	5·32 A 2	5 31 38·823	+315·99	+ 0·18	− 0·21	+ 3 44 3·09	+ 247·4	−22·8	− 1·8	8	39·38
346	+64 536	6·03 B 9	5 32 24·302	+581·05	+ 1·14	+ 0·12	+64 7 30·67	+ 240·7	−42·1	− 6·8	10 16	44·48 44·05
347	− 1 969	1·75 B 0	5 33 40·466	+304·47	+ 0·16	0·00	− 1 13 56·70	+ 229·7	−20·6	+ 0·1	11 44	45·98 42·04
348	− 6 1255	5·62 B 3	5 34 9·042	+293·15	+ 0·15	− 0·04	− 6 5 40·64	+ 225·6	−21·2	− 1·1	8	44·25
349	+10 828	6·10 K 0	5 34 17·495	+333·15	+ 0·20	+ 0·32	+11 0 20·24	+ 224·3	−24·2	− 1·3	5	38·12
350	+21 908	3·00 B3p	5 34 39·260	+358·61	+ 0·24	+ 0·01	+21 6 50·23	+ 221·2	−26·0	− 2·2	8	38·63

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ ((P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

* 305 3^m1 to 3^m8

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°			h m s	s	s	s	° ′ ″	″	″	″				
351	−27	2395	6·75 K 2	5 36 7·427	+238·92	+ 0·13	+ 0·08	−27 14 18·78	+ 208·5	−17·4	− 1·0	3	3	43·81	42·47
352	+24	909	7·04 F 2	5 36 47·843	+367·06	+ 0·24	+ 0·04	+24 11 53·72	+ 202·5	−26·6	+ 3·7	9	10	38·91	39·63
353	−17	1199	6·22 B 9	5 37 3·965	+264·45	+ 0·13	+ 0·01	−17 52 34·25	+ 200·2	−19·2	+ 0·4	8		44·69	
354	+56	1050	6·19 K 0	5 38 46·958	+508·78	+ 0·59	+ 0·21	+56 33 27·86	+ 185·3	−37·0	+ 3·0	6		43·52	
355	−20	1171	6·44 G 0	5 42 19·121	+258·45	+ 0·13	− 0·11	−20 8 51·04	+ 154·5	−18·8	+ 4·6	3		47·87	
356	+15	926	5·91 B 8	5 43 52·868	+345·06	+ 0·17	+ 0·06	+15 48 16·53	+ 140·8	−25·1	− 0·7	5		44·97	
357	+ 9	954	5·89 G 5	5 44 7·380	+329·65	+ 0·15	− 0·23	+ 9 30 21·08	+ 138·7	−24·0	− 6·5	4		44·91	
358	+29	997	7·21 F 8	5 44 13·163	+383·18	+ 0·21	− 0·02	+29 38 31·71	+ 137·8	−27·9	−11·4	3		43·01	
359	− 9	1235	2·20 B 0	5 45 23·	+284·57	+ 0·12	+ 0·02	− 9 41 09·51	+ 127·7	−20·7	− 0·4	0	7		39·99
360	+85	80	6·41 K 0	5 45 34·204	+1886·88	+12·33	+ 1·18	+85 10 27·11	+ 126·1	−137·3	+ 0·3	165	173	40·40	40·34
361	−14	1251	5·57 G 5	5 47 20·135	+272·83	+ 0·12	− 0·18	−14 29 48·64	+ 110·7	−19·8	− 4·5	7	8	38·12	38·24
362	+ 7	1055	* M a	5 52 27·813	+324·67	+ 0·12	+ 0·19	+ 7 23 57·32	+ 65·9	−23·7	+ 1·1	3	14	49·13	42·07
363	+11	975	6·08 G 5	5 54 1·696	+334·54	+ 0·11	+ 0·68	+11 30 58·94	+ 52·2	−24·4	− 5·4	5	6	43·59	42·35
364	−18	1247	6·92 F 5	5 55 21·390	+263·77	+ 0·11	− 0·02	−18 3 34·37	+ 40·6	−19·2	− 0·5	3		43·93	
365	+44	1328	2·07 A0p	5 55 51·623	+440·66	+ 0·12	− 0·50	+44 56 39·79	+ 36·2	−32·2	− 0·3	6	6	44·86	45·87
366	+ 0	1239	5·25 A 0	5 56 15·262	+308·61	+ 0·10	− 0·10	+ 0 32 59·17	+ 32·8	−22·5	+ 0·1	4		44·08	
367	− 9	1285	5·10 A 5	5 56 41·740	+284·82	+ 0·10	+ 0·11	− 9 33 36·98	+ 28·9	−20·8	− 5·2	4		41·65	
368	+33	1209	6·80 A 2	5 56 57·062	+394·54	+ 0·10	− 0·09	+33 8 6·22	+ 26·6	−28·8	+ 0·6	3	4	43·13	43·14
369	+75	247	6·52 K 5	5 58 15·622	+827·26	+ 0·18	+ 0·55	+75 35 16·69	+ 15·2	−60·4	− 1·6	11	12	46·71	46·92
370	+22	1140	6·28 B 8	5 58 40·401	+362·41	+ 0·09	− 0·05	+22 24 5·34	+ 11·6	−26·4	− 2·2	3	5	39·47	39·74
371	−25	2865	5·90 A 0	5 59 11·166	+243·84	+ 0·10	− 0·04	−25 25 2·13	+ 7·1	−17·8	− 1·6	4	5	45·76	44·85
372	+ 9	1064	4·19 A 2	5 59 37·846	+330·05	+ 0·09	+ 0·11	+ 9 38 56·72	+ 3·2	−24·0	− 2·9	7	8	38·98	38·75
373	+42	1473	6·13 G 5	5 59 41·469	+431·56	+ 0·08	+ 1·08	+42 54 56·42	+ 2·7	−31·4	−14·6	7	8	40·29	40·64
374	+51	1146	6·30 A 5	6 0 31·068	+475·77	+ 0·05	+ 0·06	+51 34 37·41	− 4·6	−34·7	− 4·6	6		43·91	
375	−14	1331	4·67 A 0	6 3 53·488	+271·71	+ 0·10	− 0·10	−14 55 46·38	− 34·0	−19·8	+ 1·8	4	5	43·71	42·38
376	+26	1082	7·01 B 9	6 4 12·752	+374·49	+ 0·05	− 0·06	+26 41 20·60	− 36·8	−27·2	− 0·4	4	5	42·34	41·70
377	− 3	1297	6·75 B 5	6 4 26·464	+299·54	+ 0·08	− 0·08	− 3 20 3·62	− 38·8	−21·8	− 0·3	5	4	44·51	43·60
378	+14	1152	4·40 B 2	6 4 42·953	+342·56	+ 0·06	+ 0·03	+14 46 34·54	− 41·2	−25·0	− 2·3	8	54	46·68	41·27
379	−21	1353	6·12 M b	6 4 50·534	+253·88	+ 0·10	+ 0·04	−21 48 17·88	− 42·4	−18·5	− 1·7	4		44·82	
380	+48	1352	6·09 A 0	6 7 46·708	+459·46	− 0·08	+ 0·22	+48 43 24·55	− 68·1	−33·5	− 5·4	8	11	40·66	40·98
381	+65	517	5·39 K 0	6 7 49·268	+603·52	− 0·32	+ 0·12	+65 43 53·32	− 68·4	−44·0	− 2·9	18	17	45·53	44·29
382	+19	1253	5·70 B 9	6 9 3·543	+355·40	+ 0·03	+ 0·04	+19 48 12·63	− 79·2	−25·8	− 1·2	9		38·92	
383	+22	1241	* M 2	6 11 51·545	+362·66	0·00	− 0·48	+22 31 22·59	− 103·7	−26·4	− 1·3	10	8	40·61	41·24
384	.....		7·48 F 5	6 12 16·284	+404·85	− 0·06	− 0·53	+36 9 46·99	− 107·2	−29·4	+ 0·3	4	5	42·81	42·08
385	+36	1388	6·42 F 0	6 12 16·884	+404·86	− 0·06	− 0·53	+36 9 55·62	− 107·4	−29·4	+ 0·8	4	6	43·21	42·19
386	− 6	1469	4·09 K 0	6 12 25·	+292·69	+ 0·07	− 0·03	− 6 15 28·22	− 108·5	−21·2	− 1·8	0	5		36·34
387	+61	869	5·30 M a	6 13 18·221	+553·36	− 0·42	+ 0·01	+61 32 3·21	− 116·3	−40·2	− 0·4	11	16	39·72	39·45
388	+ 1	1275	6·34 F 5	6 13 18·884	+310·09	+ 0·06	− 0·04	+ 1 11 10·40	− 116·4	−22·6	+ 3·4	6		39·81	
389	+12	1084	5·11 F 5	6 13 38·057	+336·38	+ 0·03	+ 0·55	+12 17 15·17	− 119·1	−24·4	+18·6	10	30	48·36	45·31
390	+23	1275	6·26 B 2	6 13 55·629	+366·04	− 0·02	+ 0·04	+23 45 34·95	− 121·7	−26·6	− 0·4	7		37·99	
391	+59	959	4·42 A 0	6 15 12·712	+529·49	− 0·40	− 0·12	+59 1 53·55	− 132·9	−38·4	+ 2·0	4	5	40·42	40·17
392	+14	1235	5·98 A 0	6 15 14·778	+341·56	+ 0·01	− 0·12	+14 24 10·97	− 133·3	−24·8	− 0·1	7	6	38·99	39·46
393	−16	1426	5·28 K 0	6 15 28·146	+267·09	+ 0·08	− 0·06	−16 47 45·29	− 135·2	−19·4	+ 0·8	7	8	39·58	39·90
394	− 7	1373	5·13 B 3	6 17 18·216	+289·07	+ 0·06	− 0·04	− 7 48 2·28	− 151·2	−21·0	+ 0·1	6	8	38·12	38·01
395	+30	1211	7·06 A 0	6 18 51·699	+384·18	− 0·08	+ 0·02	+29 59 20·79	− 164·8	−27·8	− 1·5	11	12	40·14	40·23
396	+22	1304	3·19 M a	6 19 56·069	+362·58	− 0·05	+ 0·40	+22 32 28·61	− 174·1	−26·2	−11·3	7		41·77	
397	−17	1467	1·99 B 1	6 20 29·799	+264·27	+ 0·08	− 0·04	−17 55 46·27	− 179·0	−19·2	− 0·4	7	4	46·50	44·86
398	+ 4	1236	4·48 A 5	6 21 7·054	+318·08	+ 0·02	− 0·12	+ 4 37 11·34	− 184·4	−23·0	+ 1·1	10	57	46·90	41·86
399	+ 8	1316	6·11 A 0	6 21 18·201	+328·19	0·00	− 0·03	+ 8 54 45·65	− 186·1	−23·8	− 2·0	4	5	40·38	41·75
400	−11	1478	5·39 K 0	6 21 50·373	+280·26	+ 0·06	− 0·35	−11 30 6·14	− 190·7	−20·4	− 4·0	2	3	40·68	41·51

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*362 0m1 to 1m2 *383 3m2 to 4m2

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
401	+70 401	5·99 A 2	6 22 32·758	+684·21	− 1·48	+ 0·09	+70 33 57·60	− 196·9	−49·6	+ 2·3	11 14	41·50 41·84
402	+42 1552	7·14 G 5	6 22 48·122	+427·00	− 0·24	0·00	+41 59 21·35	− 199·1	−30·9	− 1·1	5 6	42·44 42·90
403	− 1 1242	5·73 A 0	6 24 7·607	+303·90	+ 0·03	− 0·02	− 1 28 34·40	− 210·6	−22·0	− 3·5	6 8	40·99 40·66
404	− 4 1526	4·98 B 3	6 25 29·356	+296·34	+ 0·04	− 0·06	− 4 43 47·11	− 222·5	−21·4	+ 0·4	8 31	48·68 42·35
405	+16 1159	6·33 G 5	6 25 35·353	+346·09	− 0·05	− 0·68	+16 16 18·78	− 223·3	−25·0	− 5·3	7 8	39·27 39·01
406	+28 1138	6·85 A 2	6 27 12·681	+378·60	− 0·14	− 0·01	+28 14 49·62	− 237·4	−27·4	− 1·5	7	38·43
407	−22 1429	6·69 A 2	6 27 19·391	+252·22	+ 0·08	+ 0·11	−22 33 23·39	− 238·4	−18·2	+ 0·8	5 3	44·73 41·80
408	+47 1310	7·14 K 5	6 29 4·804	+449·27	− 0·41	+ 0·28	+46 57 38·01	− 253·7	−32·4	− 1·4	8 9	38·65 39·15
409	+52 1097	7·2 A 3	6 29 57·692	+479·98	− 0·57	+ 0·12	+52 30 4·51	− 261·2	−34·6	− 8·0	8 7	39·01 39·41
410	+86 79	6·57 G 5	6 30 9·287	+2629·57	−55·83	+ 1·57	+86 44 8·15	− 263·0	−190·0	−10·6	13 12	41·61 41·09
411	+82 177	6·39 A 2	6 33 59·286	+1267·50	−11·82	+ 0·33	+82 9 49·18	− 296·1	−91·2	− 5·4	10 12	40·94 41·93
412	− 5 1710	5·48 B 9	6 34 7·562	+295·37	+ 0·02	0·00	− 5 10 5·30	− 297·4	−21·2	− 1·4	4	42·06
413	−18 1480	5·81 G 5	6 34 11·465	+262·81	+ 0·06	− 0·07	−18 37 2·96	− 297·9	−18·8	+ 1·6	2	40·68
414	+16 1223	1·93 A 0	6 34 49·379	+346·31	− 0·10	+ 0·30	+16 26 37·68	− 303·4	−25·0	− 4·4	6 35	40·94 40·70
415	+ 2 1315	6·42 K 0	6 35 3·598	+313·67	− 0·02	− 0·21	+ 2 44 56·04	− 305·5	−22·5	− 4·8	4	39·91
416	+22 1416	6·28 K 0	6 36 4·802	+360·85	− 0·15	+ 0·06	+22 4 35·77	− 314·2	−25·9	− 2·9	4 5	39·63 40·15
417	+11 1273	6·43 M a	6 38 30·608	+333·05	− 0·08	− 0·01	+11 3 3·86	− 335·2	−23·8	+ 0·7	9	39·16
418	+32 1378	6·87 G 5	6 39 29·296	+391·54	− 0·29	+ 0·07	+32 36 30·45	− 343·6	−28·0	− 1·7	8	38·66
419	+25 1406	3·18 G 5	6 40 51·367	+369·16	− 0·21	− 0·05	+25 10 56·53	− 355·4	−26·4	− 1·5	8 7	42·51 42·27
420	−25 3546	6·78 G 5	6 41 51·362	+244·70	+ 0·07	− 0·26	−25 28 59·65	− 364·0	−17·4	− 0·4	3 4	47·64 46·31
421	+13 1396	3·40 F 5	6 42 29·018	+337·53	− 0·11	− 0·81	+12 57 05·96	− 369·4	−24·1	−19·5	6 49	43·11 40·99
422	+57 1004	5·47 G 5	6 42 33·954	+511·28	− 1·06	+ 0·28	+57 13 25·28	− 370·1	−36·6	− 4·1	5	44·48
423	+ 8 1486	5·84 B 3	6 43 48·751	+327·27	− 0·08	− 0·07	+ 8 38 29·95	− 380·9	−23·4	− 0·8	5 4	43·15 41·66
424	+48 1436	5·28 K 0	6 43 50·981	+457·41	− 0·70	− 0·04	+48 50 40·66	− 381·1	−32·6	+ 0·5	7	46·15
425	−20 1576	6·00 B 8	6 44 52·930	+257·13	+ 0·06	− 0·09	−20 57 36·36	− 390·0	−18·3	+ 0·3	6	39·16
426	−14 1599	5·29 B 5	6 46 41·632	+272·05	+ 0·04	+ 0·02	−15 5 12·95	− 405·5	−19·4	− 0·5	6	41·61
427	− 2 1776	5·65 A 0	6 46 45·274	+302·27	− 0·02	− 0·11	− 2 12 51·14	− 406·1	−21·5	+ 0·5	12 13	42·00 41·70
428	+16 1298	5·69 B 8	6 46 57·123	+345·49	− 0·16	− 0·11	+16 15 40·95	− 407·8	−24·6	− 1·4	9	39·28
429	+25 1469	6·62 A 2	6 48 53·130	+370·24	− 0·27	− 0·13	+25 43 24·58	− 424·3	−26·2	+ 2·0	6	37·32
430	+44 1551	6·04 F 0	6 51 38·250	+432·99	− 0·66	+ 0·13	+43 58 28·30	− 447·8	−30·7	− 1·2	8 9	38·30 38·28
431	−11 1681	4·25 K 2	6 51 51·965	+279·71	+ 0·02	− 0·95	−11 58 28·86	− 449·7	−19·8	− 1·4	15 37	48·27 44·56
432	+10 1335	5·88 B 8	6 53 40·718	+330·30	− 0·13	− 0·18	+10 1 22·35	− 465·2	−23·3	− 2·1	7 8	38·46 39·05
433	−16 1661	4·39 B 5	6 53 54·348	+267·63	+ 0·04	− 0·02	−16 59 17·34	− 467·1	−18·8	+ 1·0	7 9	39·60 39·72
434	+38 1656	6·15 K 2	6 55 38·612	+409·11	− 0·55	− 0·32	+38 7 24·15	− 481·9	−28·8	−12·5	8 7	39·03 38·72
435	+ 3 1488	6·02 K 0	6 56 19·175	+315·64	− 0·08	− 0·08	+ 3 40 17·48	− 487·6	−22·2	− 0·7	8	38·78
436	−28 3666	1·63 B 1	6 56 39·578	+235·80	+ 0·06	+ 0·04	−28 54 10·45	− 490·5	−16·6	+ 0·2	5	42·38
437	− 8 1662	5·84 A 0	6 57 59·528	+288·37	− 0·01	− 0·15	− 8 20 8·87	− 501·7	−20·2	− 1·0	6 8	39·99 39·42
438	−25 3911	5·80 B 3	6 59 2·582	+246·68	+ 0·06	− 0·07	−25 8 36·64	− 510·6	−17·2	+ 1·9	6 6	43·30 43·32
439	+24 1502	5·21 K 0	6 59 22·028	+365·61	− 0·32	− 0·07	+24 17 18·34	− 513·4	−25·6	− 0·3	7	41·76
440	+20 1687	* G0p	7 1 8·599	+355·89	− 0·28	− 0·07	+20 38 43·23	− 528·3	−24·9	− 0·3	5 30	43·54 40·41
441	−15 1625	4·07 B 5	7 1 29·745	+271·46	+ 0·02	+ 0·01	−15 33 28·85	− 531·3	−19·0	− 0·9	1 4	50·11 39·92
442	+60 1026	6·54 K 0	7 1 36·828	+529·36	− 1·80	+ 0·38	+59 52 42·10	− 532·4	−37·0	− 0·1	5 6	45·77 45·34
443	−21 1732	6·19 K 0	7 2 39·205	+255·47	+ 0·04	+ 0·15	−21 57 16·99	− 541·1	−17·8	− 6·0	8 7	46·06 45·76
444	−11 1790	5·28 B 3	7 4 19·748	+281·87	0·00	− 0·09	−11 12 56·85	− 555·2	−19·6	− 0·6	4 6	39·93 40·00
445	+34 1533	6·47 K 0	7 4 56·604	+393·58	− 0·54	− 0·10	+33 54 45·24	− 560·4	−27·4	− 3·8	7 8	38·44 38·16
446	+ 7 1607	5·92 K 0	7 5 7·279	+324·32	− 0·15	− 0·03	+ 7 33 4·77	− 561·8	−22·6	− 3·6	10	44·15
447	+16 1397	5·58 K 0	7 5 30·003	+344·11	− 0·24	− 0·03	+16 0 44·78	− 565·1	−24·0	−10·4	7	39·91
448	−26 3916	1·98 F8p	7 6 21·417	+244·00	+ 0·06	− 0·03	−26 18 45·17	− 572·3	−16·9	+ 0·5	5 6	43·58 43·69
449	+72 352	6·45 K 0	7 8 9·855	+698·21	− 4·92	+ 0·42	+71 54 4·11	− 587·4	−48·5	+ 2·0	16 17	42·18 42·01
450	+27 1327	5·60 A 2	7 8 17·067	+372·25	− 0·42	− 0·14	+26 56 26·24	− 588·4	−25·8	− 4·1	5 6	43·77 43·01

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*440 3^m7 to 4^m1

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
451	− 0 1634	5·40 F 0	7 8 50·285	+306·85	− 0·09	− 0·21	− 0 13 4·17	− 593·0	−21·2	− 1·2	6	46·34
452	− 0 1636	4·09 A 0	7 9 18·605	+306·41	− 0·09	− 0·03	− 0 24 30·69	− 597·0	−21·2	+ 0·6	3 19	48·80 43·44
453	+47 1411	6·62 A 5	7 9 29·482	+447·44	− 1·06	− 0·33	+47 41 35·74	− 598·5	−31·0	− 8·3	4	46·66
454	+51 1295	5·69 M a	7 9 29·798	+467·72	− 2·27	+ 0·08	+51 30 50·31	− 598·5	−32·4	+ 0·9	4 3	45·67 44·52
455	+12 1469	5·84 K 0	7 11 45·413	+334·82	− 0·22	− 0·37	+12 12 12·90	− 617·4	−23·0	− 2·0	6	44·64
456	− 6 2032	6·36 K 2	7 15 5·343	+292·72	− 0·05	− 0·10	− 6 35 20·80	− 645·0	−20·0	+ 1·0	6	46·28
457	+16 1443	3·65 A 2	7 15 13·226	+345·11	− 0·30	− 0·36	+16 37 56·16	− 646·1	−23·6	− 3·9	2 3	47·22 47·54
458	+ 2 1640	6·06 G 5	7 16 45·570	+313·57	− 0·14	− 0·03	+ 2 50 2·14	− 658·9	−21·4	− 1·8	5	45·53
459	−16 1898	* F 0	7 17 12·259	+270·46	+ 0·01	+ 1·10	−16 17 58·64	− 662·4	−18·4	−13·2	5 4	46·77 46·18
460	+87 51	5·26 M a	7 17 50·809	+2817·06	−172·41	− 4·80	+87 7 34·76	− 667·7	−193·4	− 3·4	169 168	40·41 40·60
461	+37 1707	5·21 K 0	7 18 42·388	+401·64	− 0·74	− 0·72	+36 51 23·77	− 674·9	−27·4	− 2·8	5	42·57
462	+20 1775	5·16 K 2	7 18 59·944	+354·45	− 0·37	− 0·44	+20 32 22·90	− 677·3	−24·2	− 3·1	6 6	40·68 41·68
463	+82 201	5·11 M b	7 20 40·979	+1261·80	−28·57	− 0·02	+82 30 50·61	− 691·1	−86·2	− 4·1	72 68	37·56 38·07
464	+28 1385	3·89 K 0	7 22 37·459	+373·53	− 0·54	− 0·92	+27 53 57·65	− 707·0	−25·3	− 8·9	6 7	40·87 40·93
465	−13 2001	5·82 F 0	7 22 50·557	+276·98	− 0·02	− 1·42	−13 39 8·34	− 708·8	−18·7	− 1·1	6	44·82
466	+ 8 1774	3·09 B 8	7 24 26·360	+325·72	− 0·22	− 0·38	+ 8 23 29·95	− 721·8	−22·0	− 4·0	4 33	46·16 40·37
467	−22 1874	5·48 B2p	7 24 52·209	+254·50	+ 0·04	− 0·08	−22 59 1·89	− 725·4	−17·1	+ 0·1	3 4	47·48 46·41
468	+78 254	7·40 G 0	7 25 21·691	+935·52	−14·22	− 1·22	+78 47 38·55	− 729·3	−63·2	−10·6	6 9	43·01 42·35
469	+ 9 1660	4·60 K 0	7 25 26·476	+327·10	− 0·23	− 0·42	+ 9 1 41·70	− 730·0	−22·0	+ 1·4	3 4	39·87 40·22
470	+28 1400	5·09 K 0	7 26 42·260	+373·41	− 0·56	− 0·23	+28 1 16·39	− 740·3	−25·1	− 2·7	3	39·49
471	+12 1567	4·85 K 0	7 27 0·841	+333·96	− 0·28	− 0·02	+12 6 41·86	− 742·8	−22·4	− 1·7	5 30	48·37 41·72
472	− 4 1979	6·38 K 0	7 28 23·016	+296·24	− 0·08	− 0·07	− 5 7 12·51	− 753·9	−19·8	− 0·8	7	47·16
473	+17 1596	5·64 K 0	7 28 55·446	+345·60	− 0·36	+ 0·34	+17 11 38·82	− 758·4	−23·2	− 8·4	7	40·33
474	+46 1286	5·80 K 5	7 32 54·113	+435·78	− 1·30	− 0·29	+46 17 33·38	− 790·4	−29·0	− 3·9	9 10	41·85 41·59
475	− 7 2065	6·43 K 2	7 33 51·640	+289·67	− 0·06	+ 0·23	− 8 11 56·77	− 798·1	−19·2	+ 0·1	7 8	42·49 43·19
476	−19 1967	5·66 B 3	7 34 29·116	+263·76	+ 0·02	− 0·04	−19 35 23·28	− 803·1	−17·4	+ 0·3	7	44·89
477	− 3 1979	5·17 F 5	7 34 47·524	+298·77	− 0·10	− 0·51	− 3 59 52·76	− 805·5	−19·8	+ 1·6	4 12	46·14 43·28
478	+14 1713	6·66 B 9	7 35 1·739	+338·18	− 0·33	+ 0·13	+14 9 26·13	− 807·4	−22·4	− 9·8	5	43·59
479	+33 1560	6·91 G 5	7 35 7·031	+387·64	− 0·77	− 0·08	+33 18 4·36	− 808·1	−25·6	− 4·3	4	43·71
480	+54 1167	6·59 B 9	7 35 15·109	+475·68	− 1·92	− 0·14	+54 0 59·06	− 809·2	−31·5	− 7·6	2 4	45·18 46·18
481	+ 5 1739	0·48 F 5	7 36 41·	+318·75	− 0·22	− 4·74	+ 5 21 26·22	− 820·7	−21·0	−102·9	0 24	40·28
482	+23 1780	6·18 K 5	7 37 58·970	+359·28	− 0·52	− 0·08	+23 8 8·54	− 831·0	−23·6	− 0·4	7 6	43·44 44·16
483	+ 0 2054	6·36 G 5	7 40 31·396	+307·98	− 0·16	+ 0·05	+ 0 18 33·28	− 851·2	−20·2	− 1·2	8 7	42·56 41·62
484	+39 1998	6·75 F 8	7 41 32·495	+407·50	− 1·06	+ 0·40	+39 41 21·56	− 859·2	−26·6	−68·7	4 5	38·18 37·99
485	+65 593	6·00 K 0	7 41 54·313	+572·97	− 4·08	+ 0·28	+65 34 40·10	− 862·1	−37·5	+ 1·9	14 15	40·41 40·33
486	+63 733	6·35 A 5	7 41 56·726	+543·57	− 3·40	− 0·50	+62 57 13·93	− 862·4	−35·6	− 6·0	8 13	42·30 41·24
487	+28 1463	1·21 K 0	7 42 15·980	+371·82	− 0·66	− 4·74	+28 8 55·52	− 864·8	−24·2	− 5·2	9 8	40·42 40·95
488	+18 1733	5·02 K 2	7 43 13·889	+347·89	− 0·45	− 0·54	+18 38 1·68	− 872·6	−22·6	− 6·1	7 8	38·51 38·47
489	−22 2027	5·84 B 5	7 45 3·588	+257·95	+ 0·03	− 0·09	−22 23 43·36	− 886·9	−16·6	+ 0·4	8	41·72
490	+ 5 1790	6·95 K 0	7 45 23·989	+318·93	− 0·24	− 0·07	+ 5 32 6·54	− 889·6	−20·6	− 3·6	8	39·42
491	+26 1656	6·82 G 5	7 46 44·673	+366·57	− 0·64	− 0·26	+26 23 26·42	− 900·1	−23·6	− 1·8	8	38·57
492	−24 6030	3·47 G0p	7 47 11·417	+252·39	+ 0·04	− 0·03	−24 43 59·85	− 903·6	−16·2	− 0·3	5 4	43·03 41·75
493	−10 2253	6·32 K 0	7 48 33·077	+284·21	− 0·06	+ 0·02	−10 59 58·87	− 914·2	−18·2	− 4·2	5	48·11
494	+ 2 1808	5·11 B 8	7 49 6·377	+311·26	− 0·20	− 0·15	+ 1 53 45·22	− 918·5	−20·0	− 0·5	7 20	49·44 44·61
495	−13 2267	5·34 G 0	7 49 27·	+278·26	− 0·03	− 0·45	−13 45 47·36	− 921·2	−17·8	−34·4	0 7	38·47
496	− 2 2322	6·86 A 5	7 49 37·939	+301·26	− 0·14	− 0·22	− 2 55 28·33	− 922·6	−19·2	− 0·4	6	45·67
497	+20 1946	5·36 A 0	7 52 44·908	+350·23	− 0·52	− 0·12	+20 1 3·18	− 946·7	−22·3	− 4·5	10 10	39·70 39·51
498	+30 1612	6·86 K 0	7 53 8·046	+375·23	− 0·78	− 0·03	+29 59 7·99	− 949·7	−23·9	+ 1·1	8	39·22
499	+44 1693	6·47 K 0	7 54 46·152	+420·96	− 1·42	+ 0·38	+44 6 46·02	− 962·2	−26·8	+ 0·8	13	42·95
500	−29 5236	4·85 A 2	7 55 40·450	+239·26	+ 0·06	− 0·06	−30 11 55·34	− 969·2	−15·0	+ 0·6	4 3	46·69 46·51

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*459 5m4 to 6m0

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
501	+ 2 1833	5·40 K 0	7 55 45·188	+312·15	− 0·21	− 1·07	+ 2 21 32·98	− 969·8	−19·6	+ 9·7	17 16	41·62 41·39
502	+13 1811	6·20 K 5	7 56 47·644	+335·07	− 0·40	− 0·12	+13 22 45·97	− 977·8	−21·1	− 1·6	10 10	39·41 40·02
503	−18 2118	4·64 A 2	7 57 37·545	+268·92	0·00	− 0·07	−18 15 38·55	− 984·1	−16·8	− 5·0	7 10	41·93 41·82
504	+ 9 1843	6·11 F 5	7 59 7·865	+325·81	− 0·32	− 0·04	+ 9 3 11·73	− 995·5	−20·4	+ 2·5	7 8	38·35 38·96
505	− 5 2339	6·30 G 0	7 59 58·547	+294·77	− 0·11	+ 0·07	− 6 11 47·51	−1002·0	−18·4	− 2·8	7 11	49·28 46·26
506	+13 1831	5·11 A 0	8 2 17·546	+334·45	− 0·41	− 0·23	+13 15 43·92	−1019·4	−20·8	− 7·1	1 7	48·14 37·91
507	−25 5530	6·66 K 2	8 2 26·483	+252·34	+ 0·06	− 0·08	−25 33 23·39	−1020·6	−15·6	− 1·0	6 7	46·34 45·33
508	− 0 1903	6·60 K 0	8 3 16·432	+306·47	− 0·18	− 0·15	− 0 25 45·87	−1026·8	−19·0	− 1·4	6	42·03
509	−20 2395	5·25 A 3	8 5 5·599	+264·84	+ 0·02	− 0·11	−20 24 30·96	−1040·5	−16·2	− 0·9	3 4	44·87 43·72
510	+84 169	6·39 A 0	8 5 13·739	+1432·90	−64·13	− 0·77	+84 12 30·74	−1041·4	−89·1	− 2·2	80 77	45·06 45·08
511	−23 6828	2·88 F 5	8 5 24·831	+256·15	+ 0·05	− 0·60	−24 9 32·35	−1042·9	−15·8	+ 5·1	3	43·53
512	+35 1767	6·64 F 8	8 6 56·291	+388·71	− 1·07	+ 1·63	+35 36 25·44	−1054·3	−23·9	−23·7	7	39·18
513	+53 1221	6·81 F 5	8 7 20·041	+460·15	− 2·35	+ 0·28	+53 23 41·83	−1057·1	−28·3	− 7·0	4 5	46·41 44·99
514	+25 1865	5·83 G 5	8 7 26·715	+361·84	− 0·72	− 0·48	+25 39 41·68	−1058·0	−22·2	−35·2	6	40·86
515	+15 1775	6·14 A 0	8 8 10·402	+377·20	− 0·46	− 0·18	+14 46 43·92	−1063·4	−20·6	− 2·0	4 5	42·68 41·59
516	+49 1711	7·08 K 0	8 8 33·234	+437·98	− 1·92	− 0·13	+49 6 33·15	−1066·2	−26·8	− 0·5	5	41·18
517	+56 1278	5·90 K 0	8 9 51·872	+478·33	− 2·81	− 0·20	+56 36 15·08	−1075·8	−29·2	− 3·6	5	41·61
518	+ 9 1917	3·76 K 2	8 13 48·301	+325·67	− 0·36	− 0·34	+ 9 20 27·95	−1104·8	−19·5	− 5·1	13 62	49·17 42·40
519	+ 4 1945	6·68 *	8 14 40·594	+315·83	− 0·28	+ 0·01	+ 4 22 29·38	−1111·2	−18·9	+ 0·1	5	46·36
520	+82 235	6·17 A 0	8 15 3·358	+1161·49	−42·24	− 0·67	+82 35 26·26	−1113·9	−70·2	− 2·9	12 11	41·94 41·87
521	−15 2362	6·31 A 0	8 15 5·538	+275·21	− 0·01	− 0·13	−16 7 44·14	−1114·2	−16·4	− 1·0	3	45·20
522	+72 409	6·20 K 5	8 15 12·020	+660·88	− 9·01	+ 0·12	+72 33 54·68	−1115·0	−39·8	− 2·8	11	41·66
523	− 9 2471	6·32 A 5	8 16 51·289	+287·83	− 0·08	− 0·43	−10 0 31·39	−1127·0	−17·0	+ 2·9	7 9	40·78 40·88
524	+24 1909	5·87 A 0	8 17 33·931	+356·84	− 0·72	− 0·15	+24 10 52·26	−1132·1	−21·2	− 2·6	9	40·34
525	+61 1043	6·48 G 5	8 18 32·865	+503·97	− 3·72	+ 0·13	+60 47 29·48	−1139·1	−30·0	− 0·5	13 15	41·00 40·83
526	+32 1725	7·48 A 3	8 20 43·900	+376·78	− 1·02	− 0·04	+32 27 20·58	−1154·8	−22·2	0·0	6	39·22
527	+11 1830	6·29 K 5	8 21 11·185	+328·12	− 0·40	+ 0·03	+10 47 40·61	−1158·1	−19·2	− 2·7	6 8	39·73 39·73
528	−23 7277	5·55 K 5	8 22 54·154	+259·30	+ 0·06	− 0·22	−23 52 58·64	−1170·3	−15·0	+ 2·7	4	42·73
529	+17 1842	6·18 F 2	8 23 0·300	+340·92	− 0·55	− 1·32	+17 12 45·70	−1171·0	−20·0	−15·8	8	40·35
530	− 3 2339	3·95 A 0	8 23 9·733	+300·24	− 0·16	− 0·46	− 3 44 31·41	−1172·1	−17·4	− 2·6	13 29	48·25 44·79
531	+ 8 2053	5·23 K 0	8 23 13·896	+322·03	− 0·35	− 0·23	+ 7 43 43·75	−1172·7	−18·8	− 0·8	6 7	40·06 40·23
532	−14 2517	5·91 A 2	8 23 36·169	+278·80	− 0·02	− 0·09	−14 45 56·36	−1175·2	−16·2	+ 3·0	7 5	47·03 46·59
533	− 3 2345	5·41 A 5	8 23 57·327	+300·10	− 0·16	− 0·36	− 3 49 18·68	−1177·7	−17·4	− 6·2	6	45·21
534	+26 1789	6·67 A 0	8 26 49·563	+360·41	− 0·82	− 0·23	+26 21 38·85	−1198·0	−20·8	− 1·5	11	39·21
535	+36 1836	6·14 F 2	8 30 9·709	+386·03	− 1·26	− 1·17	+36 36 26·46	−1221·2	−22·0	− 0·6	8 10	39·47 40·12
536	+10 1837	5·98 A 0	8 34 23·205	+325·42	− 0·41	− 0·22	+ 9 49 50·11	−1250·4	−18·2	− 1·2	6	43·89
537	−18 2416	7·06 G 5	8 34 41·489	+272·41	+ 0·02	+ 0·03	−18 30 19·42	−1252·4	−15·2	− 2·7	4	47·22
538	+65 643	5·69 G 0	8 34 46·713	+532·97	− 5·26	− 0·38	+65 11 44·40	−1253·0	−30·0	+ 8·5	10 10	44·23 43·73
539	+ 6 2001	4·18 A 0	8 35 0·593	+318·06	− 0·33	− 0·47	+ 5 52 45·32	−1254·6	−17·8	− 1·2	10 31	48·98 43·80
540	+20 2149	6·68 F 0	8 36 50·456	+344·92	− 0·66	− 0·25	+19 57 20·49	−1267·0	−19·2	− 1·7	5 7	43·62 43·81
541	+51 1443	6·96 G 5	8 37 4·710	+437·88	− 2·46	− 0·24	+51 36 28·42	−1268·6	−24·4	+ 5·0	5 6	41·21 41·22
542	+82 253	6·69 A 0	8 37 31·841	+1083·44	−43·46	− 0·44	+82 25 13·28	−1271·7	−60·7	− 2·0	7 8	45·36 44·79
543	+46 1422	5·52 K 0	8 37 34·176	+414·30	+ 1·92	+ 0·21	+46 0 38·45	−1272·0	−23·1	+ 8·5	3 5	44·57 43·25
544	+ 3 2039	4·32 B 3	8 40 36·714	+313·71	− 0·29	− 0·12	+ 3 34 45·62	−1292·4	−17·2	− 0·5	5 6	45·22 44·06
545	+18 2027	4·17 K 0	8 41 50·734	+341·03	− 0·63	− 0·14	+18 20 23·42	−1300·6	−18·6	−23·3	13 43	47·37 42·91
546	+31 1876	6·14 K 0	8 42 17·657	+368·02	− 1·05	0·00	+30 52 49·45	−1303·7	−20·1	− 0·8	5	45·98
547	+ 6 2030	6·00 A 2	8 42 22·446	+317·75	− 0·34	− 0·02	+ 5 51 47·44	−1304·1	−17·3	− 0·8	4	46·44
548	−20 2667	6·13 A 2	8 42 40·916	+268·46	+ 0·06	+ 0·04	−20 59 6·51	−1306·2	−14·6	+ 2·5	2	45·21
549	−10 2634	6·47 K 5	8 43 42·950	+288·02	− 0·06	− 0·14	−10 49 25·76	−1313·0	−15·6	+ 2·3	6	42·57
550	+ 6 2036	3·48 F 8	8 44 7·894	+316·44	− 0·36	− 1·28	+ 6 36 12·44	−1315·8	−17·2	− 5·4	7 8	39·40 40·01

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*519 G0 + A2

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
551	− 1	2130	5·22	A 0	8	44	42·957	+304·32	− 0·20	− 0·22	− 1	42	46·42	−1319·6	−16·4	− 0·2	4	6	42·76	41·92
552	+89	13	7·01	A 0	8	45	53·952	+4973·00	−1446·60	− 2·79	+88	46	14·81	−1327·4	−271·3	+ 0·7	53	44	37·65	37·64
553	+44	1797	5·24	G 5	8	48	35·948	+402·71	− 1·81	− 0·10	+43	54	50·37	−1345·0	−21·4	+ 4·1	6	7	43·70	43·06
554	+59	1198	6·08	F 0	8	49	9·987	+473·43	− 3·78	+ 0·20	+59	14	42·69	−1348·7	−25·2	− 0·2	5		43·85	
555	− 8	2518	7·42	*	8	51	48·550	+292·58	− 0·09	− 0·06	− 8	34	12·32	−1365·7	−15·3	− 0·3	4		47·44	
556	+78	297	7·40	F 0	8	51	57·748	+780·87	−20·46	− 0·55	+78	20	17·54	−1366·7	−41·3	− 1·0	9		43·87	
557	+ 6	2060	3·30	K 0	8	52	45·123	+317·81	− 0·35	− 0·69	+ 6	8	12·80	−1371·7	−16·6	+ 1·0	13	41	47·68	43·42
558	−17	2691	5·90	K 0	8	52	54·461	+275·60	+ 0·04	+ 0·23	−18	2	58·66	−1372·7	−14·4	− 1·9	3		46·91	
559	+12	1941	5·70	K 0	8	53	11·816	+327·67	− 0·48	− 0·07	+11	49	6·68	−1374·6	−17·1	− 1·5	4		46·14	
560	+22	2029	7·01	G 5	8	54	12·011	+346·55	− 0·76	+ 0·02	+22	3	12·99	−1380·9	−18·0	− 0·9	5		44·38	
561	+12	1948	4·27	A 3	8	55	45·226	+327·87	− 0·49	+ 0·22	+12	3	8·99	−1390·7	−17·0	− 3·4	10	45	46·13	42·22
562	+48	1707	3·12	A 5	8	55	47·844	+415·06	− 2·23	− 4·43	+48	14	23·49	−1391·0	−21·4	−24·0	3	4	44·92	44·51
563	+38	1986	6·54	K 5	8	57	20·432	+381·46	− 1·45	− 0·04	+37	48	1·09	−1400·7	−19·6	− 0·6	6	7	42·56	43·22
564	+ 0	2449	5·80	K 0	8	59	24·731	+306·86	− 0·22	− 0·37	− 0	17	11·00	−1413·6	−15·5	+ 7·6	7	8	42·35	42·22
565	+47	1633	3·68	A 0	9	0	13·287	+409·82	− 2·17	− 0·35	+47	21	21·26	−1418·6	−20·8	− 5·8	7	9	39·37	39·91
566	− 4	2530	6·74	A 0	9	1	13·931	+299·15	− 0·14	− 0·11	− 4	58	21·75	−1424·8	−15·0	+ 0·5	4	6	40·24	41·58
567	+ 5	2116	5·41	K 0	9	3	20·499	+315·95	− 0·34	− 0·11	+ 5	17	35·34	−1437·7	−15·7	− 1·0	6		38·42	
568	+30	1817	5·38	G 5	9	5	0·218	+360·36	− 1·08	− 0·22	+29	51	23·69	−1447·9	−17·8	− 0·5	4		44·26	
569	+11	1984	5·14	B 8	9	5	2·435	+325·07	− 0·46	− 0·17	+10	52	14·08	−1448·0	−16·0	− 1·0	6	27	46·17	41·86
570	+84	196	6·26	F 0	9	5	16·315	+1246·19	−78·54	+ 1·79	+84	23	10·54	−1449·4	−62·4	+ 0·9	69	71	44·94	44·91
571	+27	1715	5·96	G 5	9	5	51·127	+353·89	− 0·96	− 0·92	+26	50	16·59	−1453·0	−17·4	−37·4	4		46·12	
572	−26	6766	6·20	A 2	9	6	32·865	+261·45	+ 0·16	− 0·27	−26	33	51·74	−1457·1	−12·8	+ 1·2	2		47·71	
573	−11	2565	5·81	K 0	9	6	47·634	+287·59	− 0·02	+ 0·08	−12	9	14·85	−1458·6	−14·1	− 1·5	7		40·12	
574	+64	723	4·74	*	9	6	49·031	+492·88	− 5·12	+ 1·50	+63	43	7·45	−1458·7	−24·3	− 6·6	6	9	42·80	43·02
575	+18	2138	6·75	A 0	9	9	8·565	+337·22	− 0·67	− 0·25	+18	15	0·21	−1472·6	−16·4	− 2·6	8	9	38·85	38·57
576	+ 2	2167	3·84	A 0	9	11	45·785	+311·27	− 0·29	+ 0·86	+ 2	31	36·46	−1488·0	−14·8	−31·4	17	56	47·59	44·00
577	+54	1285	4·89	A 5	9	12	36·180	+431·06	− 3·04	+ 0·64	+54	13	47·44	−1493·0	−20·6	+ 5·5	6		41·58	
578	+ 1	2267	6·54	F 5	9	14	5·939	+308·77	− 0·25	− 0·66	+ 0	56	19·82	−1501·7	−14·6	− 1·5	4	6	41·00	41·75
579	+47	1658	5·70	A 0	9	14	10·408	+402·28	− 2·20	+ 0·21	+47	1	36·99	−1502·1	−19·1	+ 0·8	5	7	43·23	42·25
580	− 5	2762	5·40	K 0	9	14	12·704	+297·81	− 0·12	+ 0·13	− 6	8	36·20	−1502·3	−14·0	+ 0·3	5	6	47·73	47·64
581	+74	393	6·54	G 5	9	14	49·503	+619·53	−12·34	− 0·86	+74	13	43·68	−1505·9	−29·5	− 7·2	11	10	41·34	41·60
582	+23	2072	7·13	K 0	9	14	53·370	+345·27	− 0·84	− 0·28	+23	17	21·34	−1506·2	−16·2	− 1·7	5	6	41·85	41·92
583	−16	2749	6·91	A 0	9	16	37·256	+281·29	+ 0·06	+ 0·13	−16	35	21·35	−1516·2	−13·1	− 2·3	4	5	42·75	42·86
584	+35	1979	3·30	K 5	9	18	0·970	+367·20	− 1·33	− 1·81	+34	36	18·44	−1524·1	−17·1	+ 1·3	9		41·92	
585	+57	1214	5·98	M b	9	18	3·994	+440·46	− 3·51	− 0·10	+56	54	45·42	−1524·4	−20·5	− 1·3	7		41·82	
586	+13	2074	6·58	F 5	9	18	34·850	+327·82	− 0·54	− 0·29	+13	19	33·58	−1527·3	−15·1	− 8·6	6	8	40·28	40·65
587	−25	7114	4·93	M a	9	19	16·682	+265·74	+ 0·18	− 0·07	−25	45	6·48	−1531·3	−12·2	− 1·0	6	7	44·71	45·07
588	−28	7196	4·90	K 0	9	21	2·315	+260·71	+ 0·22	− 1·06	−28	37	8·42	−1541·2	−11·8	+ 1·6	5		43·85	
589	+37	1978	6·45	A 5	9	21	17·540	+371·15	− 1·46	− 0·68	+36	48	10·29	−1542·6	−17·0	− 3·4	5	7	40·05	41·25
590	+17	2078	6·27	K 0	9	22	46·514	+332·89	− 0·64	− 0·60	+16	48	8·54	−1550·8	−15·1	− 2·2	7	8	40·84	40·27
591	−24	8060	6·91	B 9	9	23	23·132	+267·77	+ 0·18	− 0·14	−25	7	12·73	−1554·2	−12·0	+ 1·8	4	6	47·24	46·41
592	− 8	2680	2·16	K 2	9	25	7·805	+294·93	− 0·06	− 0·10	− 8	26	27·81	−1563·8	−13·1	+ 2·7	13	31	47·23	43·96
593	− 2	2901	4·78	F 5	9	26	36·623	+303·63	− 0·17	+ 0·85	− 2	32	58·16	−1571·8	−13·4	− 1·7	5		45·39	
594	+34	1999	5·98	K 0	9	27	42·258	+362·65	− 1·31	− 0·12	+33	52	36·20	−1577·8	−16·0	− 5·1	6		44·06	
595	+28	1768	6·59	A 0	9	28	22·582	+350·26	− 1·02	− 0·26	+27	36	30·43	−1581·4	−15·3	− 2·9	4		44·00	
596	+10	2014	5·28	K 0	9	29	16·855	+321·63	− 0·45	− 0·03	+ 9	56	14·72	−1586·2	−14·0	− 1·7	4	5	46·52	47·85
597	+52	1401	3·26	F8p	9	29	31·832	+411·37	− 2·78	−10·31	+51	54	25·97	−1587·6	−18·0	−54·2	3	2	46·58	45·28
598	+ 2	2217	6·15	F 5	9	30	6·344	+310·29	− 0·26	− 0·11	+ 2	5	12·00	−1590·6	−13·4	− 3·9	3		45·55	
599	+81	302	4·58	K 2	9	30	7·467	+854·48	−36·72	− 0·66	+81	33	0·51	−1590·8	−37·6	− 1·8	90	94	40·57	40·77
600	−12	2926	6·21	K 5	9	30	31·627	+288·17	+ 0·03	− 0·01	−13	17	40·41	−1592·9	−12·4	− 2·0	4		47·48	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*555 F0 + A2 *574 F5 + A5

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°			h m s	s	s	s	° ′ ″	″	″	″				
601	+52	1402	4·65 A 0	9 31 24·630	+411·63	− 2·82	− 0·70	+52 16 30·97	−1597·6	−17·8	− 4·2	5		46·03	
602	−18	2728	6·25 A 0	9 33 14·227	+279·28	+ 0·13	− 0·28	−19 21 31·35	−1607·1	−11·8	− 4·9	6	6	44·85	44·67
603	+67	602	6·28 K 5	9 35 20·945	+497·66	− 6·77	− 0·13	+67 29 56·37	−1618·1	−21·0	− 4·5	15	13	41·69	42·06
604	+ 5	2207	4·78 K 0	9 35 50·906	+314·03	− 0·32	− 1·08	+ 4 52 33·37	−1620·7	−13·1	− 5·5	7		43·25	
605	+43	1943	6·63 K 0	9 36 0·548	+381·52	− 1·92	− 0·38	+43 22 17·31	−1621·5	−16·0	− 7·0	6	7	41·78	41·29
606	+20	2351	6·80 B 9	9 36 6·501	+336·71	− 7·60	− 0·15	+20 51 26·52	−1622·1	−14·0	− 1·5	5	6	42·28	43·11
607	− 0	2231	4·10 K 0	9 37 18·144	+306·08	− 0·20	+ 0·31	− 0 54 52·89	−1628·2	−12·7	− 6·9	7	10	48·61	46·00
608	− 9	2898	6·19 B 9	9 37 20·878	+293·11	− 0·01	− 0·19	−10 20 35·08	−1628·3	−12·1	+ 0·2	3		48·89	
609	+10	2044	3·76 *	9 38 29·045	+321·14	− 0·46	− 0·98	+10 7 14·93	−1634·1	−13·2	− 3·9	8	26	47·00	43·23
610	+40	2241	5·50 K 0	9 38 54·923	+372·03	− 1·68	− 0·45	+39 59 12·36	−1636·3	−15·2	− 4·6	5		43·82	
611	+49	1868	6·34 A 0	9 39 26·447	+394·75	− 2·41	− 0·26	+48 39 36·39	−1639·0	−16·2	− 1·9	4		46·27	
612	+35	2042	6·03 F 2	9 39 42·270	+361·74	− 1·40	− 0·12	+35 19 23·32	−1640·3	−14·8	− 5·5	4	5	45·50	44·86
613	+14	2136	5·62 M a	9 41 0·634	+326·67	− 0·56	− 0·01	+14 15 4·25	−1646·9	−13·2	− 0·4	6	6	40·12	40·29
614	−22	2705	6·78 G 5	9 42 18·549	+276·01	+ 0·20	− 0·42	−22 31 18·45	−1653·3	−11·0	+ 0·6	11	11	46·58	46·50
615	+24	2129	3·12 G0p	9 43 1·021	+340·82	− 0·88	− 0·35	+24 0 19·53	−1656·8	−13·6	− 1·6	10	11	41·96	42·44
616	+19	2254	6·92 K 0	9 43 5·433	+333·08	− 0·71	+ 0·16	+18 54 53·24	−1657·1	−13·3	− 1·9	8		40·80	
617	+ 7	2181	5·99 M a	9 43 31·845	+316·45	− 0·37	+ 0·03	+ 6 56 24·87	−1659·3	−12·6	− 3·4	10	11	42·58	42·74
618	+59	1268	3·89 F 0	9 47 27·424	+430·22	− 4·02	− 3·86	+59 16 31·71	−1678·3	−16·8	−15·7	12	13	41·53	41·44
619	+25	2169	5·33 A 2	9 49 2·925	+340·46	− 0·90	+ 0·06	+24 37 59·92	−1685·9	−13·0	−18·4	10		40·35	
620	+61	1151	6·42 K 0	9 51 25·649	+437·46	− 4·50	+ 0·09	+61 21 10·69	−1697·0	−16·6	− 0·4	12	16	43·54	43·79
621	+33	1920	6·60 F 2	9 53 35·730	+352·14	− 1·26	− 0·37	+32 37 20·06	−1707·1	−13·0	+ 0·7	12	14	40·93	41·55
622	− 6	3033	7·03 K 0	9 53 38·951	+298·23	− 0·04	− 0·20	− 7 24 26·91	−1707·3	−11·0	− 0·6	6	7	40·12	39·57
623	+57	1242	5·71 K 5	9 56 26·120	+413·17	− 3·56	− 0·37	+57 3 8·03	−1719·9	−15·0	− 3·5	4	5	45·48	44·45
624	+22	2148	6·61 A 2	9 56 41·259	+334·38	− 0·79	− 0·29	+21 33 39·62	−1721·1	−12·1	+ 2·7	5		46·02	
625	+ 8	2301	4·89 M a	9 57 34·351	+317·23	− 0·40	− 0·23	+ 8 17 5·76	−1725·0	−11·4	− 2·7	14	54	47·66	43·21
626	− 0	2285	7·02 K 0	10 0 16·010	+306·37	− 0·17	+ 0·06	− 0 49 28·42	−1736·9	−10·8	− 8·9	10	10	42·40	41·79
627	+84	225	6·48 K 0	10 0 52·269	+956·44	−66·54	− 0·30	+84 9 43·97	−1739·6	−34·2	+ 0·4	13	12	41·58	41·03
628	−23	8973	5·80 F 0	10 2 2·315	+277·98	+ 0·29	− 0·71	−24 2 34·39	−1744·6	− 9·6	+ 2·0	8	9	45·08	45·32
629	+45	1798	7·49 F 2	10 4 2·068	+372·78	− 2·08	− 0·11	+45 18 15·88	−1753·1	−12·8	− 1·7	6	8	44·55	45·97
630	+ 6	2259	6·29 G 5	10 4 10·609	+313·96	− 0·32	− 0·23	+ 5 51 21·64	−1753·7	−10·7	− 2·1	7	8	42·97	43·51
631	+17	2171	3·58 A0p	10 4 36·548	+327·04	− 0·64	− 0·04	+17 0 25·88	−1755·5	−11·2	− 0·6	7	34	48·25	42·84
632	+12	2149	1·34 B 8	10 5 43·	+321·16	− 0·49	− 1·69	+12 12 44·47	−1760·2	−10·8	+ 0·3	0	8		39·09
633	+19	2307	7·11 G 5	10 6 23·868	+328·94	− 0·70	+ 0·38	+18 46 38·19	−1763·1	−11·0	− 6·8	6	7	45·75	45·96
634	−12	3101	5·42 F 0	10 7 39·609	+293·30	+ 0·10	− 0·87	−12 34 4·40	−1768·2	− 9·8	−11·7	7		47·22	
635	+41	2063	6·51 K 0	10 7 58·523	+361·69	− 1·74	− 0·12	+40 54 29·25	−1769·6	−12·0	− 1·0	6		41·43	
636	−11	2820	3·83 K 0	10 8 8·988	+293·89	+ 0·08	− 1·38	−12 6 22·27	−1770·3	− 9·6	− 9·3	12	32	47·15	44·20
637	+38	2110	6·14 K 0	10 8 15·383	+355·62	− 1·52	− 0·24	+37 38 56·74	−1770·7	−11·8	− 3·3	5	6	42·46	41·94
638	+28	1852	6·96 G 5	10 9 52·420	+340·85	− 1·06	− 0·24	+28 29 23·52	−1777·3	−11·1	− 1·7	7	6	42·28	42·12
639	+79	328	6·72 A 0	10 11 8·501	+627·52	−21·70	+ 0·55	+79 11 44·64	−1782·4	−20·6	− 0·5	13	14	43·34	43·34
640	+24	2207	5·91 G 0	10 13 46·520	+333·62	− 0·86	− 1·48	+23 45 7·90	−1792·8	−10·5	+ 2·9	6		40·46	
641	+71	534	6·58 A 3	10 13 51·165	+483·80	− 8·69	− 0·68	+71 18 41·36	−1793·1	−15·4	− 5·2	14	13	41·49	41·28
642	+14	2228	5·74 M a	10 13 59·823	+322·17	− 0·54	− 0·15	+13 58 41·90	−1793·6	−10·1	− 2·2	6		38·64	
643	+43	2005	3·52 A 2	10 14 5·500	+363·20	− 1·89	− 1·52	+43 9 53·60	−1794·1	−11·4	− 4·5	5	7	38·91	39·74
644	−18	2855	6·57 A 2	10 14 9·460	+286·76	+ 0·24	− 0·17	−19 3 30·03	−1794·3	− 8·9	− 1·3	6	6	47·04	46·87
645	− 7	3001	5·40 F 0	10 15 8·711	+299·23	+ 0·01	− 1·09	− 7 49 7·36	−1798·1	− 9·3	+ 0·1	3	16	47·45	42·52
646	+54	1367	6·22 K 0	10 17 17·888	+388·39	− 3·05	− 0·43	+54 28 7·21	−1806·3	−11·8	− 1·0	6		45·75	
647	+ 3	2352	6·53 B 3	10 18 27·091	+309·87	− 0·22	− 0·08	+ 2 32 30·42	−1810·7	− 9·3	− 0·4	6		45·08	
648	−22	2904	6·48 A 3	10 19 7·383	+282·63	+ 0·34	− 0·36	−23 27 30·42	−1813·2	− 8·4	+ 2·0	7		47·37	
649	+42	2115	3·21 K 5	10 19 21·496	+358·03	− 1·78	− 0·74	+41 45 6·21	−1814·1	−10·6	+ 2·9	6		46·13	
650	+34	2120	5·83 A 3	10 20 13·856	+345·56	− 1·31	− 0·10	+34 9 40·37	−1817·3	−10·2	− 1·4	6		43·61	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*609 F5 + A3

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+	
	°			h m s	s	s	s	° ′ ″	″	″	″			
651	+ 9	2351	5·92 M a	10 22 37·152	+316·09	− 0·38	+ 0·07	9 2 23·14	−1826·0	− 9·1	− 4·2	6	47·09	
652	+84	234	5·64 A 3	10 22 42·761	+879·76	−67·14	− 8·94	+84 30 28·88	−1826·4	−26·0	− 4·1	25 23	37·95	37·75
653	−16	3052	4·06 K 5	10 23 40·236	+291·09	+ 0·22	− 0·89	−16 34 48·67	−1829·8	− 8·3	− 8·3	2 8	48·72	43·17
654	+60	1263	7·01 K 0	10 24 26·854	+400·49	− 3·94	− 0·79	+59 51 10·40	−1832·6	−11·4	− 3·3	9 11	45·51	45·96
655	+83	297	5·34 F 2	10 25 10·210	+733·47	−41·16	− 4·41	+82 48 51·92	−1835·1	−21·2	+ 2·5	84 73	42·72	43·24
656	+16	2123	7·17 F 8	10 25 45·656	+322·66	− 0·58	− 0·90	+16 0 40·58	−1837·2	− 9·0	− 1·0	5 6	39·88	40·13
657	+29	2057	6·92 K 0	10 27 5·689	+336·34	− 1·05	+ 0·07	+28 50 15·85	−1841·9	− 9·3	− 0·8	6	43·96	
658	+10	2166	3·85 B0p	10 30 10·775	+315·93	− 0·38	− 0·06	+ 9 33 52·21	−1852·3	− 8·4	− 0·6	12 56	47·33	43·26
659	+41	2101	4·84 A 5	10 30 19·324	+351·13	− 1·67	− 1·20	+40 41 1·23	−1852·8	− 9·4	− 0·8	8	45·75	
660	+35	2154	5·58 A 2	10 30 39·680	+343·21	− 1·34	− 0·24	+35 14 48·86	−1853·9	− 9·1	− 1·4	5	45·27	
661	+22	2236	7·32 K 0	10 31 40·400	+327·47	− 0·76	+ 0·03	+21 51 9·07	−1857·2	− 8·6	− 0·5	3	43·96	
662	+ 2	2334	6·73 K 2	10 32 31·444	+309·46	− 0·19	− 0·18	+ 2 27 48·19	−1860·0	− 8·0	+ 0·2	5 6	41·69	41·63
663	−11	2918	5·85 F 8	10 34 2·756	+296·96	+ 0·14	+ 1·75	−11 57 45·76	−1864·9	− 7·5	−68·0	7	41·73	
664	− 8	2963	7·12 G 0	10 34 30·368	+299·98	+ 0·07	− 0·66	− 8 34 45·63	−1866·4	− 7·6	− 5·9	5 6	41·32	41·32
665	−16	3100	5·11 K 0	10 36 8·686	+293·06	+ 0·26	− 0·71	−16 36 59·78	−1871·6	− 7·2	+ 2·2	7 8	41·86	41·42
666	+47	1797	7·30 A 2	10 37 9·157	+358·19	− 2·13	− 0·39	+47 6 8·21	−1874·7	− 8·8	− 5·0	11	41·83	
667	+81	349	6·70 A 0	10 38 39·710	+590·52	−24·46	+ 0·73	+80 41 20·58	−1879·4	−14·6	+ 0·9	13 15	41·63	41·95
668	+11	2269	7·29 K 5	10 39 38·898	+315·93	− 0·40	− 0·39	+10 37 3·92	−1882·3	− 7·5	− 3·2	9	40·65	
669	+ 5	2384	6·34 K 0	10 40 45·193	+311·29	− 0·24	+ 0·14	+ 5 0 37·98	−1885·7	− 7·3	− 3·4	9 10	39·31	39·92
670	−23	9500	6·81 K 0	10 42 4·188	+287·74	+ 0·44	− 0·10	−23 43 22·24	−1889·5	− 6·6	+ 2·1	6 6	40·82	42·48
671	+19	2371	5·64 K 0	10 43 43·004	+322·49	− 0·65	+ 0·64	+19 9 20·50	−1894·3	− 7·3	− 4·5	7 8	41·03	40·70
672	−25	8237	6·86 K 0	10 44 20·039	+286·40	+ 0·48	− 1·21	−25 47 5·67	−1896·0	− 6·4	+ 4·9	5	47·85	
673	− 1	2446	6·19 M a	10 46 7·560	+306·07	− 0·06	− 0·09	− 1 41 39·86	−1901·0	− 6·6	+ 0·5	6 7	45·42	45·81
674	+11	2283	5·27 A 0	10 46 37·808	+315·36	− 0·39	− 0·04	+10 48 37·06	−1902·4	− 6·8	− 2·8	10 53	44·95	42·13
675	+28	1931	6·12 F 5	10 47 9·070	+329·75	− 0·98	− 0·04	+28 14 18·47	−1903·8	− 7·1	+ 2·7	6	45·10	
676	+53	1440	6·58 K 0	10 49 32·774	+360·54	− 2·63	− 0·78	+52 46 12·84	−1910·3	− 7·5	− 5·9	9	40·77	
677	−12	3293	5·84 G 0	10 51 48·725	+297·93	+ 0·24	0·00	−13 29 29·98	−1916·2	− 6·0	+ 0·9	6	40·63	
678	+ 1	2501	6·05 F 2	10 53 7·966	+308·00	− 0·11	+ 0·70	+ 1 0 14·25	−1919·5	− 6·1	− 0·4	8	40·44	
679	+20	2538	6·94 K 0	10 55 57·183	+320·66	− 0·64	+ 0·11	+19 53 24·82	−1926·5	− 6·0	− 1·8	6 7	40·95	41·85
680	−18	3072	6·96 K 0	10 56 29·152	+294·50	+ 0·38	+ 0·28	−19 20 7·85	−1927·8	− 5·5	− 8·4	7 6	44·82	44·27
681	+36	2139	6·22 M a	10 56 45·678	+334·13	− 1·32	+ 0·59	+36 21 43·88	−1928·4	− 6·2	− 5·6	6	41·31	
682	− 9	3182	7·06 A 0	10 56 47·424	+300·87	+ 0·17	− 0·20	−10 3 25·05	−1928·6	− 5·6	+ 2·2	4	48·26	
683	+12	2284	6·36 F 5	10 57 4·426	+315·01	− 0·40	− 1·58	+11 58 25·38	−1929·2	− 5·8	+ 3·5	3 4	48·28	47·56
684	+ 4	2407	5·05 K 0	10 57 58·702	+309·76	− 0·18	+ 0·08	+ 3 53 10·84	−1931·3	− 5·6	− 1·8	13 27	47·61	43·86
685	+57	1302	2·44 A 0	10 58 50·184	+360·87	− 3·04	+ 0·97	+56 39 3·14	−1933·3	− 6·6	+ 2·7	5 6	42·74	42·50
686	− 2	3270	7·13 G 5	11 0 4·111	+305·37	+ 0·01	− 0·14	− 3 14 35·24	−1936·1	− 5·4	− 3·0	6	41·98	
687	+62	1160	7·12 F 8	11 0 17·768	+371·85	− 3·92	− 1·70	+61 55 29·33	−1936·7	− 6·6	− 7·3	9 12	45·30	45·25
688	+62	1161	1·95 K 0	11 0 39·667	+371·72	− 3·93	− 1·74	+62 1 16·90	−1937·5	− 6·6	− 7·1	4 8	47·65	46·43
689	+32	2102	7·32 G 5	11 1 55·343	+328·03	− 1·08	− 0·21	+31 42 22·81	−1940·3	− 5·6	+ 1·6	6	41·13	
690	+ 8	2455	4·66 F 0	11 2 26·349	+311·76	− 0·26	− 2·31	+ 7 36 24·06	−1941·3	− 5·2	− 4·9	14 47	47·63	43·20
691	−10	3190	6·14 A 3	11 3 3·315	+301·04	+ 0·20	+ 0·10	−10 49 3·30	−1942·7	− 5·0	−10·5	7	46·94	
692	+18	2452	6·59 K 5	11 4 5·099	+317·82	− 0·56	+ 0·16	+18 0 29·54	−1944·9	− 5·2	− 3·7	7 6	40·19	38·51
693	−20	3347	7·22 A 0	11 4 5·347	+295·00	+ 0·45	− 0·28	−20 53 46·83	−1944·9	− 4·8	− 1·2	5	46·28	
694	+72	515	6·87 F 0	11 5 0·706	+406·40	− 7·52	− 0·78	+72 13 47·91	−1946·8	− 6·6	− 1·3	12 13	43·20	43·06
695	+25	2344	5·63 A 2	11 6 8·300	+321·79	− 0·80	+ 0·04	+24 55 45·96	−1949·2	− 5·0	− 0·1	6	39·15	
696	+82	325	7·06 G 0	11 6 40·017	+526·73	−25·22	− 4·76	+82 0 20·87	−1950·2	− 8·5	−19·0	13	46·37	
697	+45	1897	3·15 K 0	11 6 51·600	+337·79	− 1·78	− 0·62	+44 46 13·03	−1950·6	− 5·2	− 3·1	6	40·00	
698	+48	1919	7·24 F 5	11 7 37·550	+341·02	− 2·03	− 0·33	+48 4 7·30	−1952·2	− 5·4	+ 4·8	6	43·61	
699	+86	161	7·17 A 2	11 8 48·897	+721·40	−75·41	− 4·03	+85 54 43·82	−1954·5	−11·2	+ 0·1	35 35	45·83	45·70
700	+69	602	6·42 A 2	11 9 0·832	+382·33	− 5·58	+ 0·53	+68 32 36·97	−1954·8	− 5·8	+ 0·7	12 13	44·71	45·15

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°			h m s	s	s	s	° ′ ″	″	″	″				
701	−22	3095	4·52 A 2	11 9 11·719	+295·13	+ 0·51	+ 0·03	−22 33 8·45	−1955·2	− 4·3	−10·3	7		45·28	
702	+55	1446	6·48 A 2	11 9 50·577	+349·02	− 2·72	0·00	+55 9 58·84	−1956·4	− 5·1	− 0·8	5	6	44·88	45·27
703	+21	2298	2·58 A 3	11 11 26·941	+318·00	− 0·64	+ 1·02	+20 47 54·56	−1959·5	− 4·5	−13·6	2		38·82	
704	+16	2234	3·41 A 0	11 11 37·098	+315·19	− 0·48	− 0·43	+15 42 12·01	−1959·8	− 4·4	− 8·2	6	31	44·12	41·64
705	+23	2322	4·87 M a	11 12 32·813	+319·19	− 0·72	− 0·15	+23 22 5·79	−1961·4	− 4·4	− 1·2	6		41·83	
706	−18	3141	6·78 A 0	11 12 48·772	+297·73	+ 0·44	− 0·38	−19 21 52·67	−1961·9	− 4·0	− 1·0	5		47·48	
707	+14	2367	5·48 K 0	11 13 15·025	+313·87	− 0·40	− 0·05	+13 34 49·76	−1962·7	− 4·2	− 1·5	7		40·31	
708	− 6	3344	6·03 F 0	11 14 26·028	+304·15	+ 0·14	− 0·08	− 6 51 42·54	−1964·8	− 7·9	− 1·1	7	8	42·17	42·80
709	+ 2	2409	5·44 K 5	11 14 42·954	+308·37	− 0·09	+ 0·36	+ 2 17 9·84	−1965·3	− 4·0	−14·8	8		39·57	
710	+38	2225	4·78 A 2	11 16 24·756	+327·39	− 1·34	− 0·49	+38 27 37·21	−1968·1	− 4·1	− 7·6	9	10	41·10	40·62
711	− 0	2428	7·00 F 8	11 16 50·021	+306·73	0·00	− 1·53	− 1 22 43·74	−1968·9	− 3·7	−15·9	7		44·03	
712	−13	3345	3·82 K 0	11 16 50·338	+300·86	+ 0·34	− 0·85	−14 30 29·40	−1968·8	− 3·6	+20·0	6	22	46·48	42·64
713	+ 6	2437	4·13 A 0	11 18 33·500	+309·98	− 0·18	− 0·64	+ 6 18 12·63	−1971·6	− 3·6	− 1·3	12	45	48·54	43·39
714	+17	2356	5·63 F 2	11 23 0·125	+313·78	− 0·47	− 1·01	+16 43 53·66	−1978·2	− 3·2	− 1·4	9	8	41·74	40·67
715	+27	2021	7·15 A 2	11 23 6·892	+318·25	− 0·82	− 0·23	+27 1 19·73	−1978·4	− 3·3	+ 0·3	9		41·78	
716	+52	1563	7·22 F 0	11 23 8·304	+335·12	− 2·28	+ 0·11	+52 24 25·87	−1978·4	− 3·5	− 2·5	7		40·63	
717	+ 9	2494	6·82 K 0	11 23 42·725	+310·64	− 0·24	− 0·03	+ 8 56 5·89	−1979·2	− 3·2	− 2·3	7		41·19	
718	−20	3420	6·79 A 0	11 24 4·330	+299·28	+ 0·53	− 0·32	−21 4 52·02	−1979·7	− 3·0	− 1·0	4	6	45·51	44·76
719	+30	2163	6·78 F 0	11 27 25·651	+318·36	− 0·92	− 0·77	+30 14 36·70	−1984·1	− 2·8	−20·5	8		42·34	
720	+81	373	6·13 A 0	11 28 23·948	+428·82	−17·54	− 6·49	+81 24 9·52	−1985·2	− 3·8	+ 3·1	13	14	44·38	44·27
721	+70	665	4·06 M a	11 28 27·578	+356·64	− 5·26	− 0·78	+69 36 26·42	−1985·3	− 3·1	− 2·0	14	14	47·37	47·12
722	+ 3	2521	5·81 F 5	11 31 48·432	+308·28	− 0·08	− 1·22	+ 3 20 17·24	−1989·1	− 2·3	−10·8	6	7	44·80	44·45
723	− 3	3144	6·58 K 0	11 32 25·855	+306·19	+ 0·12	− 0·28	− 4 5 2·43	−1989·8	− 2·2	− 4·9	5		46·08	
724	+21	2331	6·44 K 0	11 32 27·367	+313·39	− 0·56	− 0·42	+20 43 5·00	−1989·8	− 2·3	− 1·2	5		42·92	
725	+11	2376	6·69 K 0	11 32 56·441	+310·52	− 0·29	+ 0·40	+11 27 56·34	−1990·3	− 2·2	− 3·5	3	4	45·94	46·26
726	− 0	2458	4·47 K 0	11 34 23·263	+307·19	+ 0·04	+ 0·02	− 0 32 51·65	−1991·7	− 2·1	+ 3·9	11	40	48·13	43·41
727	+78	392	6·71 K 5	11 34 36·564	+376·06	− 9·99	+ 0·20	+77 52 20·63	−1992·0	− 2·6	+ 0·9	9	10	47·05	46·88
728	+47	1894	6·25 F 2	11 35 53·866	+322·43	− 1·73	− 0·20	+47 6 42·23	−1993·2	− 2·0	− 3·4	5		41·33	
729	−15	3323	6·48 M a	11 37 18·513	+303·45	+ 0·46	− 0·09	−16 20 33·97	−1994·4	− 1·8	− 1·4	6		42·00	
730	− 7	3271	7·42 G 0	11 38 3·814	+305·51	+ 0·24	− 0·13	− 8 7 41·84	−1995·1	− 1·7	− 1·3	8	9	42·22	41·56
731	+36	2216	7·23 M b	11 42 58·123	+314·58	− 1·10	− 0·45	+36 10 17·32	−1998·7	− 1·3	+ 1·7	9	11	40·12	39·70
732	+48	1966	3·85 K 0	11 43 25·090	+318·07	− 1·72	− 1·38	+48 3 23·87	−1999·0	− 1·2	+ 2·3	14	13	42·41	41·81
733	+56	1544	5·41 K 0	11 44 15·585	+320·87	− 2·35	+ 0·15	+55 54 23·10	−1999·6	− 1·2	− 3·8	7	7	40·78	40·21
734	+62	1198	6·64 F 0	11 44 26·685	+324·14	− 3·02	− 0·52	+61 40 49·09	−1999·7	− 1·2	− 4·4	9	13	44·75	43·39
735	+ 9	2549	5·22 A 0	11 45 20·775	+308·61	− 0·18	− 0·39	+ 8 31 25·16	−2000·2	− 1·0	+ 0·6	9	8	42·32	42·95
736	+29	2214	7·21 F 2	11 45 49·830	+311·84	− 0·78	− 0·72	+28 41 42·42	−2000·4	− 1·0	− 1·8	6		41·00	
737	+15	2383	2·23 A 2	11 46 30·726	+309·42	− 0·35	− 3·43	+14 51 6·34	−2000·8	− 0·8	−11·9	8	34	46·57	42·99
738	+ 2	2489	3·80 F 8	11 48 5·164	+307·57	0·00	+ 4·94	+ 2 2 49·65	−2001·5	− 0·8	−27·5	9	36	45·64	41·53
739	−26	8807	6·53 K 0	11 48 5·352	+303·79	+ 0·80	− 0·67	−27 0 58·72	−2001·5	− 0·7	+ 0·2	3		47·36	
740	− 4	3152	5·81 K 0	11 48 28·751	+306·74	+ 0·19	+ 0·03	− 5 3 19·05	−2001·7	− 0·7	− 0·5	4	5	45·51	45·49
741	−11	3190	6·22 F 0	11 48 49·705	+305·96	+ 0·37	− 1·48	−11 54 38·36	−2001·9	− 0·6	+ 0·5	2		43·32	
742	+50	1871	7·07 K 2	11 49 37·696	+314·58	− 1·81	− 0·20	+50 12 33·81	−2002·2	− 0·6	+ 1·9	3		45·62	
743	+16	2307	6·73 A 2	11 50 11·645	+308·94	− 0·36	+ 0·23	+15 42 55·50	−2002·5	− 0·6	− 6·8	6		41·14	
744	+54	1475	2·54 A 0	11 51 12·474	+314·37	− 2·08	+ 1·04	+53 58 21·53	−2002·8	− 0·4	+ 0·6	7		41·74	
745	−16	3358	5·16 A 0	11 53 27·812	+306·17	+ 0·52	− 0·38	−16 52 20·78	−2003·5	− 0·2	− 1·1	6	8	42·82	42·56
746	+41	2253	6·54 F 5	11 54 40·601	+309·99	− 1·22	− 1·47	+40 37 22·63	−2003·7	− 0·1	− 7·1	7		42·59	
747	+33	2174	6·30 F 0	11 55 33·355	+308·98	− 0·88	− 0·84	+32 33 11·81	−2003·9	0·0	− 6·9	6		38·36	
748	+20	2664	7·06 M b	11 57 31·250	+307·84	− 0·45	− 0·70	+19 41 53·15	−2004·2	+ 0·2	− 3·1	4	5	38·34	37·94
749	− 9	3413	5·63 G 5	11 58 10·228	+307·14	+ 0·36	+ 0·83	−10 9 37·56	−2004·1	+ 0·2	−48·3	4		44·29	
750	+ 7	2502	4·57 A 3	11 58 18·620	+307·44	− 0·09	− 0·02	+ 6 53 35·10	−2004·2	+ 0·2	− 3·3	11	33	47·09	41·78

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°			h m s	s	s	s	° ′ ″	″	″	″		
751	+13	2482	6·93 A 0	11 58 40·132	+307·50	− 0·24	− 0·27	+12 39 22·33	−2004·2	+ 0·3	− 0·7	4 5	45·33 45·35
752	+65	863	7·25 A 3	11 59 4·119	+308·50	− 3·16	− 0·63	+65 13 4·49	−2004·3	+ 0·4	− 4·8	9 11	46·70 45·82
753	+86	176	6·38 F 5	12 2 10·103	+289·88	−18·20	− 4·95	+85 51 51·10	−2004·2	+ 0·6	+ 8·8	44 45	45·80 45·77
754	+ 9	2583	4·24 G 5	12 2 39·752	+307·08	− 0·14	− 1·49	+ 9 0 37·61	−2004·1	+ 0·7	+ 4·5	8 27	47·06 42·20
755	+49	2110	7·77 F 5	12 3 34·502	+304·89	− 1·61	− 1·14	+49 26 12·05	−2004·0	+ 0·8	+ 0·9	7 6	45·60 45·64
756	−11	3238	6·70 F 0	12 4 13·582	+307·85	+ 0·42	− 0·77	−11 57 44·86	+2003·9	+ 0·8	− 0·8	7	47·97
757	+39	2496	7·27 A 2	12 6 56·096	+304·06	− 1·06	− 0·34	+38 54 39·30	−2003·3	+ 1·1	− 6·8	8 9	41·22 41·89
758	+ 6	2559	5·74 F 0	12 7 30·578	+306·86	− 0·04	− 1·07	+ 6 5 5·09	−2003·2	+ 1·2	+ 1·5	8 9	40·37 40·37
759	+17	2446	6·34 A 0	12 7 58·757	+305·90	− 0·34	− 0·14	+17 5 14·31	−2003·1	+ 1·2	− 0·6	12 12	43·84 43·35
760	− 1	2632	7·12 K 0	12 8 48·080	+307·54	+ 0·18	+ 0·12	− 2 25 11·97	−2002·8	+ 1·3	− 8·2	7 6	44·60 44·48
761	+26	2316	5·81 K 0	12 9 19·092	+304·66	− 0·60	− 0·34	+26 8 55·91	−2002·6	+ 1·3	− 3·3	7	40·93
762	−25	9091	7·40 K 2	12 9 23·762	+309·96	+ 0·84	− 0·05	−25 39 47·83	−2002·6	+ 1·2	− 3·6	4 5	48·06 47·93
763	+11	2440	5·81 A 2	12 10 53·218	+306·15	− 0·15	− 0·65	+10 32 25·61	−2002·0	+ 1·5	− 2·1	7	40·94
764	−16	3424	2·78 B 8	12 13 13·895	+309·72	+ 0·60	− 1·11	−17 15 51·99	−2000·9	+ 1·7	+ 1·6	10 8	45·16 40·00
765	+73	549	6·55 K 0	12 13 21·397	+282·14	− 3·90	− 0·33	+72 49 45·59	−2000·8	+ 1·6	− 3·9	13 14	46·01 46·10
766	+24	2443	5·06 K 0	12 13 48·834	+303·72	− 0·52	− 0·21	+24 13 23·25	−2000·6	+ 1·8	− 1·4	5 7	40·56 41·23
767	−15	3442	5·96 A 2	12 14 24·373	+309·81	+ 0·58	− 0·35	−16 24 57·77	−2000·3	+ 1·8	− 0·3	5	46·35
768	+88	71	6·28 F 0	12 14 45·548	+ 64·07	+24·74	− 5·96	+87 58 37·01	−2000·1	+ 0·8	+ 5·2	41 31	37·53 37·84
769	+31	2350	6·14 *	12 16 0·479	+301·82	− 0·71	+ 0·70	+30 31 42·24	−1999·4	+ 2·0	−13·0	7	44·03
770	+ 0	2920	5·92 A 3	12 16 6·392	+307·41	+ 0·15	+ 0·18	− 0 30 33·57	−1999·3	+ 2·0	− 2·1	6 6	46·34 46·18
771	+ 0	2926	4·00 A 0	12 17 20·740	+307·39	+ 0·15	− 0·42	− 0 23 20·87	−1998·5	+ 2·1	− 2·2	11 25	48·69 45·75
772	+58	1371	5·72 K 2	12 18 25·969	+290·05	− 1·98	+ 0·52	+58 8 33·11	−1997·8	+ 2·2	− 7·8	6 6	45·67 45·32
773	+52	1626	4·97 K 0	12 21 36·045	+291·32	− 1·54	+ 0·12	+51 50 20·54	−1995·4	+ 2·4	+ 0·7	9 11	40·04 40·19
774	−27	8670	6·34 K 0	12 22 40·993	+314·19	+ 0·96	+ 0·03	−27 28 18·89	−1994·5	+ 2·7	− 2·0	6 6	43·82 43·79
775	+64	896	6·37 G 5	12 22 47·014	+280·05	− 2·34	− 0·29	+64 4 46·12	−1994·4	+ 2·4	− 0·2	14 18	42·18 42·62
776	+18	2611	7·52 K 0	12 25 1·947	+302·56	− 0·30	− 0·10	+18 6 40·24	−1992·3	+ 2·8	− 3·7	8	39·63
777	+42	2307	6·85 *	12 25 6·202	+294·34	− 1·04	− 0·23	+41 37 53·96	−1992·3	+ 2·8	− 1·3	8	40·47
778	+26	2354	5·38 A0p	12 26 25·005	+299·77	− 0·52	− 0·19	+26 11 21·60	−1991·0	+ 3·0	− 2·5	5 8	38·19 37·90
779	−15	3482	3·11 A 0	12 27 16·434	+311·95	+ 0·61	− 1·46	−16 14 13·27	−1990·1	+ 3·1	−14·3	11 34	46·72 42·64
780	−22	3383	5·87 K 5	12 27 40·125	+314·29	+ 0·84	− 0·16	−23 25 12·64	−1989·7	+ 3·2	− 1·1	5 6	44·16 44·67
781	− 3	3309	7·06 K 0	12 28 16·203	+308·42	+ 0·27	− 0·48	− 3 47 5·65	−1989·1	+ 3·2	− 0·1	6	45·48
782	+ 8	2609	6·16 K 5	12 28 48·920	+305·01	− 0·02	− 0·20	+ 7 52 48·38	−1988·4	+ 3·2	+ 0·3	6 7	41·53 42·80
783	+11	2473	6·46 K 0	12 30 31·021	+304·01	− 0·09	− 0·38	+10 34 16·51	−1986·5	+ 3·4	− 0·3	7 6	40·94 40·21
784	−12	3659	5·76 G 5	12 30 58·467	+311·34	+ 0·52	− 0·17	−12 33 19·56	−1986·0	+ 3·5	+ 5·0	5	44·57
785	+38	2347	6·72 K 0	12 31 3·807	+293·04	− 0·88	− 0·32	+38 20 41·34	−1985·9	+ 3·3	− 1·7	5	43·95
786	−22	3401	2·84 G 5	12 31 45·345	+315·20	+ 0·84	+ 0·04	−23 7 13·70	−1985·1	+ 3·6	− 5·7	4	43·60
787	+19	2584	5·18 K 0	12 32 37·299	+300·93	− 0·29	− 0·04	+18 39 7·03	−1984·0	+ 3·6	+ 2·0	5 39	48·55 41·00
788	+46	1797	7·50 K 5	12 33 29·780	+287·14	− 1·14	− 0·12	+46 3 21·24	−1982·9	+ 3·4	+ 0·9	6 7	46·84 46·89
789	− 5	3535	5·90 A 0	12 34 12·673	+309·26	+ 0·34	− 0·22	− 5 33 23·63	−1982·0	+ 3·8	− 2·0	7	42·08
790	+ 2	2560	6·02 M a	12 35 49·361	+306·56	+ 0·14	− 0·52	+ 2 7 46·03	−1979·8	+ 3·9	− 2·6	7	40·09
791	−17	3668	6·08 F 0	12 36 7·772	+314·13	+ 0·69	− 0·82	−17 58 32·74	−1979·5	+ 4·0	+ 1·1	2	41·84
792	+21	2439	5·51 K 0	12 36 38·168	+299·02	− 0·34	− 0·60	+21 20 13·89	−1978·7	+ 3·9	− 1·7	6 8	37·89 38·02
793	− 7	3452	4·78 K 0	12 36 39·749	+310·21	+ 0·40	− 0·52	− 7 43 14·42	−1978·7	+ 4·0	− 3·3	8 30	49·10 43·47
794	+34	2344	6·62 K 0	12 39 53·004	+291·75	− 0·68	− 1·79	+33 57 50·85	−1974·0	+ 4·0	−11·6	10	40·18
795	− 2	3567	6·65 A 2	12 41 37·117	+308·41	+ 0·28	− 0·49	− 2 34 7·65	−1971·3	+ 4·4	− 1·2	7 8	38·39 38·14
796	+81	402	6·26 A 0	12 43 9·469	+151·24	+ 0·40	+ 1·14	+80 53 41·27	−1968·8	+ 2·5	− 4·6	16	42·76
797	−24	10540	6·29 B 9	12 45 13·883	+319·32	+ 0·94	− 0·31	−24 34 45·70	−1965·4	+ 5·0	+ 3·4	10	41·48
798	−26	9340	5·80 G 5	12 45 46·038	+321·03	+ 1·04	− 1·07	−27 19 25·72	−1964·5	+ 5·0	− 7·1	9 10	46·21 46·31
799	+28	2153	5·83 A 0	12 46 51·365	+293·01	− 0·47	− 0·73	+27 49 26·90	−1962·5	+ 4·8	+ 1·5	8 6	43·39 43·23
800	+84	289	5·28 A 2	12 48 46·221	+ 52·35	+ 8·98	− 1·76	+83 41 4·23	−1959·0	+ 1·2	+ 1·6	65 55	37·44 37·78

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*769 F5 + A2 *777 F8 + A3

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
801	+17	2551	6·53	K 5	12	49	43·041	+298·35	− 0·20	− 0·6	+17	20	43·13	−1957·3	+ 5·1	− 1·7	9		44·83	
802	+13	2602	6·34	A 3	12	51	19·155	+300·64	− 0·08	+ 0·34	+12	41	23·84	−1954·3	+ 5·3	− 3·2	6		46·83	
803	+36	2314	8·14	K 0	12	51	21·644	+285·75	− 0·67	+ 0·03	+36	0	31·67	−1954·1	+ 5·0	− 7·4	4		48·34	
804	−17	3726	6·84	A 0	12	51	21·750	+316·84	+ 0·72	− 0·26	−17	46	0·08	−1954·1	+ 5·6	− 0·2	3		47·95	
805	+56	1627	1·68	A0p	12	51	50·017	+262·52	− 1·30	+ 1·34	+56	13	51·41	−1953·3	+ 4·8	− 0·9	7	9	46·55	46·85
806	+ 0	3002	6·88	K 0	12	53	4·861	+307·15	+ 0·23	− 0·14	+ 0	19	33·94	−1950·7	+ 5·6	− 0·8	3		40·74	
807	+ 4	2669	3·66	M a	12	53	5·067	+305·36	+ 0·15	− 3·14	+ 3	40	7·74	−1950·7	+ 5·5	− 5·8	5	35	46·90	42·80
808	−14	3605	6·10	A 0	12	53	15·285	+135·61	+ 0·65	− 0·07	−15	3	23·98	−1950·4	+ 5·7	− 0·7	2		42·36	
809	+39	2580	2·90	A0p	12	53	41·658	+282·57	− 0·72	− 2·01	+38	35	16·18	−1949·5	+ 5·2	+ 5·0	5	5	40·80	40·21
810	+54	1556	6·01	A 2	12	54	6·446	+263·72	− 1·20	− 0·88	+54	22	10·73	−1948·7	+ 4·9	− 0·7	5		42·79	
811	+44	2234	6·95	A 0	12	54	20·323	+277·21	− 0·88	+ 0·03	+43	49	20·12	−1948·2	+ 5·2	− 0·3	6		40·54	
812	− 6	3705	7·70	K 0	12	56	0·266	+311·12	+ 0·42	− 0·18	− 6	40	43·64	−1944·7	+ 5·9	+ 0·7	5		39·96	
813	− 3	3384	5·88	A 0	12	57	4·821	+309·37	+ 0·34	− 0·26	− 3	32	33·87	−1942·4	+ 6·0	+ 0·5	9		40·39	
814	+76	473	6·19	K 0	12	57	18·674	+177·21	− 0·60	+ 0·15	+75	44	30·61	−1941·9	+ 3·6	+ 0·6	12		48·24	
815	+32	2311	6·72	G 5	12	58	2·478	+286·37	− 0·52	+ 0·09	+32	2	54·67	−1940·3	+ 5·6	− 1·7	6		45·98	
816	+57	1408	4·89	F 0	12	58	35·295	+256·02	− 1·20	+ 1·38	+56	38	7·86	−1939·1	+ 5·2	− 1·6	4		47·63	
817	+11	2529	2·95	K 0	12	59	41·239	+300·49	− 0·02	− 1·86	+11	13	38·29	−1936·7	+ 6·1	+ 1·9	6	11	47·47	45·42
818	+23	2530	6·87	A 0	13	0	33·308	+292·58	− 0·29	− 0·28	+22	54	22·24	−1934·7	− 6·0	− 2·7	5	6	45·94	46·15
819	−13	3651	7·23	K 5	13	3	13·392	+316·30	+ 0·64	− 0·10	−13	50	38·51	−1928·4	+ 6·7	− 1·8	6		45·50	
820	+46	1847	5·72	K 0	13	3	37·435	+270·01	− 0·84	− 0·18	+45	32	7·61	−1927·6	+ 5·8	+ 2·5	8	10	47·95	47·43
821	+28	2185	4·90	K 5	13	4	46·772	+287·60	− 0·39	+ 0·23	+27	53	33·83	−1924·7	+ 6·2	− 7·8	4	6	44·60	45·83
822	+ 6	2697	6·91	G 0	13	6	18·773	+303·66	+ 0·14	+ 0·56	+ 5	29	2·48	−1921·0	+ 6·8	−68·8	7	6	42·09	42·71
823	−22	3515	5·11	K 0	13	6	21·321	+323·40	+ 0·94	− 0·17	−22	51	3·69	−1920·8	+ 7·2	− 4·6	4		48·37	
824	+17	2595	6·18	K 0	13	7	20·408	+295·41	− 0·13	+ 0·47	+17	6	53·26	−1918·4	+ 6·6	− 1·9	5	6	38·40	38·74
825	− 4	3430	4·46	A 0	13	7	21·475	+310·90	+ 0·41	− 0·23	− 5	16	21·19	−1918·3	+ 7·0	− 3·5	9	51	48·22	41·47
826	+63	1056	6·49	A 0	13	7	54·368	+232·40	− 1·12	− 0·42	+62	7	42·38	−1916·9	+ 5·4	− 1·4	6	9	46·69	47·05
827	−25	9653	6·48	A 3	13	8	55·714	+326·88	+ 1·06	− 0·41	−26	17	9·78	−1914·2	+ 7·4	− 0·6	6	7	46·05	46·21
828	+28	2193	4·32	G 0	13	9	33·058	+285·98	− 0·36	− 6·04	+28	7	42·67	−1912·7	+ 6·6	+87·6	10	11	39·68	39·75
829	+81	416	6·32	G 5	13	11	56·840	+ 54·25	+ 5·97	− 0·36	+80	44	8·57	−1906·3	+ 1·6	+ 0·8	13		43·26	
830	+73	587	6·43	A 0	13	12	5·946	+171·55	− 0·23	+ 0·49	+73	3	48·99	−1905·9	+ 4·3	− 3·1	17	15	43·17	43·14
831	+20	2814	6·29	A 3	13	14	6·793	+291·84	− 0·17	− 0·84	+20	2	53·74	−1900·4	+ 7·1	+ 1·7	6		38·06	
832	+10	2531	5·22	G 0	13	14	17·772	+300·07	+ 0·06	− 2·27	+ 9	41	3·26	−1899·9	+ 7·4	+18·5	6	8	39·07	39·66
833	+16	2722	5·01	M a	13	15	4·685	+303·01	+ 0·16	− 0·05	+ 5	43	57·59	−1897·7	+ 7·5	+ 1·3	17	39	49·00	45·39
834	− 7	3582	7·06	F 8	13	15	6·990	+313·73	+ 0·51	+ 0·10	− 8	28	10·06	−1897·6	+ 7·8	− 5·7	6		45·52	
835	+ 4	2721	6·56	A 0	13	16	19·078	+304·31	+ 0·20	− 0·34	+ 3	57	1·18	−1894·1	+ 7·6	− 1·7	6	7	38·24	37·84
836	+35	2435	5·96	A 5	13	16	46·382	+276·12	− 0·50	− 0·24	+35	23	24·55	−1892·8	+ 7·0	+ 0·5	7		38·40	
837	+40	2647	5·69	K 0	13	18	4·622	+269·31	− 0·59	− 0·53	+40	24	44·68	−1889·1	+ 7·0	− 1·0	16	16	41·89	42·01
838	−20	3818	6·60	K 0	13	21	14·511	+324·82	+ 0·89	− 0·22	−20	39	49·62	−1879·7	+ 8·6	− 1·5	8		43·36	
839	+55	1598	2·40	A2p	13	21	54·774	+240·10	− 0·81	+ 1·40	+55	11	9·61	−1877·6	+ 6·5	− 2·5	9	10	42·40	42·10
840	−10	3672	1·21	B 2	13	22	33·303	+316·40	+ 0·59	− 0·26	−10	54	3·37	−1875·7	+ 8·5	− 3·3	14	51	45·80	42·56
841	+16	2508	7·00	K 0	13	23	13·320	+293·87	− 0·05	− 0·50	+15	49	25·57	−1873·5	+ 8·0	− 1·7	6		38·41	
842	− 0	2686	6·01	A 3	13	23	37·687	+308·11	+ 0·33	− 0·75	− 0	55	59·21	−1872·3	+ 8·4	− 0·1	5	7	40·61	40·28
843	−11	3516	5·59	K 2	13	24	4·536	+317·90	+ 0·64	− 0·93	−12	26	52·65	−1870·9	+ 8·6	− 2·4	5	7	39·81	39·28
844	+53	1622	6·16	F 0	13	25	59·282	+242·34	− 0·74	− 1·27	+53	0	15·82	−1864·8	+ 6·9	− 1·6	8	9	39·52	39·62
845	+31	2493	7·12	K 2	13	26	0·038	+277·43	− 0·36	+ 0·02	+31	24	27·63	−1864·8	+ 7·8	− 0·2	12	13	43·39	42·93
846	+ 7	2655	6·29	K 5	13	27	29·558	+300·83	+ 0·14	+ 0·05	+ 7	26	10·88	−1859·9	+ 8·6	− 0·4	10		39·10	
847	+27	2262	7·15	A 5	13	28	39·732	+282·03	− 0·26	+ 0·18	+26	38	50·42	−1856·2	+ 8·2	− 0·6	8	9	40·65	40·52
848	− 9	3711	5·43	G 5	13	30	19·845	+316·29	+ 0·58	− 0·23	− 9	54	28·71	−1850·6	+ 9·2	− 4·3	8	10	41·17	40·52
849	+ 0	3076	3·44	A 2	13	32	8·656	+307·64	+ 0·34	− 1·90	− 0	20	27·93	−1844·4	+ 9·2	+ 3·5	12	58	45·47	41·76
850	+49	2227	4·63	A 3	13	32	24·836	+246·43	− 0·62	− 1·28	+49	16	15·66	−1843·5	+ 7·4	+ 1·9	5	5	44·80	43·21

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.	R.A. 1950			Precession		P.M.	Dec. 1950			Precession		P.M.	No. Obs.		Epoch 1900+	
							1st Term	2nd Term					1st Term	2nd Term					
	°			h	m	s	s	s	s	°	′	″	″	″	″				
851	+44	2285	6·63 A 5	13	33	6·463	+255·52	− 0·55	− 0·21	+44	27	6·80	−1841·1	+ 7·8	+ 1·2	10	12	46·88	46·88
852	+ 3	2799	6·73 K 0	13	35	11·506	+304·84	+ 0·27	− 0·10	+ 2	38	11·17	−1833·9	+ 9·4	− 3·6	7		40·26	
853	+23	2591	7·05 G 5	13	35	39·188	+284·58	− 0·16	− 1·01	+22	46	57·33	−1832·2	+ 8·8	− 9·6	7	8	40·56	40·54
854	+11	2589	5·54 F 2	13	37	6·667	+296·65	+ 0·10	− 7·8	+10	59	58·43	−1827·0	+ 9·2	− 2·0	9	9	42·07	41·30
855	−15	3715	6·86 K 2	13	37	16·623	+323·31	+ 0·77	− 0·04	−16	11	36·27	−1826·4	+10·1	− 2·4	6	7	43·73	43·98
856	−22	3645	6·42 A 0	13	38	44·958	+331·24	+ 1·00	− 0·07	−23	11	50·72	−1821·1	+10·4	+ 0·2	10	12	47·77	48·21
857	+55	1625	4·75 M a	13	38	50·626	+227·75	− 0·57	− 0·26	+54	56	2·94	−1820·7	+ 7·3	− 1·4	9	9	41·75	42·32
858	+65	953	5·70 A 0	13	39	56·417	+185·88	− 0·24	+ 0·83	+65	4	27·81	−1816·7	+ 6·0	− 1·9	14		43·78	
859	+35	2474	5·98 K 0	13	40	29·754	+267·25	− 0·36	+ 0·15	+35	14	24·69	−1814·7	+ 8·6	+ 0·4	7		40·84	
860	− 4	3540	6·47 A 0	13	41	17·958	+312·58	+ 0·47	− 0·36	− 5	14	51·92	−1811·6	+10·1	− 2·5	5	7	37·42	38·70
861	−11	3591	5·82 K 0	13	43	16·189	+319·89	+ 0·66	− 0·14	−12	10	36·18	−1804·2	+10·6	0·0	5	7	41·60	42·23
862	+83	397	6·16 G 5	13	43	40·627	−168·61	+23·40	+ 2·05	+83	0	13·25	−1802·6	− 5·0	− 4·8	43	53	46·42	46·19
863	+26	2494	5·91 F 5	13	44	23·992	+278·71	− 0·17	− 0·16	+25	57	8·84	−1799·9	+ 9·3	− 6·5	6	6	45·55	43·88
864	+18	2782	4·51 F 5	13	44	53·568	+288·48	− 0·02	− 3·38	+17	42	18·14	−1798·0	+ 9·6	+ 3·4	1	26	36·45	38·56
865	+50	2027	1·91 B 3	13	45	34·379	+237·63	− 0·48	− 1·26	+49	33	44·26	−1795·4	+ 8·1	− 1·4	3		40·46	
866	+ 9	2814	6·54 A 0	13	47	15·078	+298·15	+ 0·16	− 0·10	+ 8	39	22·43	−1788·8	+10·2	0·0	6	7	41·71	41·53
867	+19	2719	6·72 F 0	13	47	43·018	+286·63	− 0·03	− 0·36	+18	52	36·71	−1786·9	+ 9·8	− 3·3	5	6	38·40	39·58
868	+62	1318	6·05 K 0	13	48	7·778	+194·36	− 0·28	+ 0·95	+61	44	18·11	−1785·3	+ 6·8	−10·4	8	11	41·21	41·80
869	+40	2701	7·82 M b	13	49	39·135	+255·86	− 0·36	− 0·04	+39	54	58·15	−1779·2	+ 9·0	− 2·5	8		41·03	
870	+19	2725	2·80 G 0	13	52	18·203	+286·10	− 0·01	− 0·44	+18	38	54·64	−1768·4	+10·2	−36·3	6	52	47·05	40·71
871	− 8	3667	6·92 K 5	13	53	8·960	+317·71	+ 0·59	− 0·19	− 9	18	55·44	−1765·0	+11·4	− 0·8	4		46·18	
872	+14	2680	6·15 F 5	13	53	25·470	+291·15	+ 0·07	− 2·01	+14	18	1·98	−1763·8	+10·4	− 0·5	6	5	42·25	41·22
873	+32	2411	6·29 F 2	13	53	37·437	+267·07	− 0·24	− 1·06	+32	16	32·66	−1761·6	− 9·7	+ 4·5	8	10	39·41	40·61
874	+22	2650	5·42 A 0	13	56	18·307	+281·17	− 0·06	− 0·08	+21	56	21·62	−1751·6	+10·3	− 5·2	10	9	38·51	38·86
875	− 2	3768	6·30 F 5	13	57	13·657	+311·11	+ 0·45	− 0·20	− 3	18	24·83	−1747·8	+11·4	− 6·8	10	13	41·52	43·19
876	+ 2	2761	4·34 A 2	13	59	5·928	+305·26	+ 0·34	+ 0·11	+ 1	47	8·46	−1739·7	+11·4	− 2·4	10	67	48·27	41·90
877	−16	3785	6·53 K 0	14	0	20·525	+327·97	+ 0·82	− 1·29	−17	7	36·14	−1734·3	+12·4	+ 0·1	4	6	43·13	44·68
878	−21	3824	6·21 F 2	14	1	5·415	+334·79	+ 0·99	− 0·04	−22	10	55·88	−1731·0	+12·6	− 1·3	5		45·59	
879	+51	1889	6·05 A 0	14	1	8·152	+223·49	− 0·33	− 0·22	+51	12	42·21	−1730·8	+ 8·6	− 0·9	6	5	44·24	43·61
880	+ 5	2836	6·28 F 2	14	1	25·054	+301·26	+ 0·26	− 0·12	+ 5	8	25·06	−1729·5	+11·4	− 0·7	8	9	40·04	39·53
881	−13	3863	6·36 K 0	14	1	44·275	+325·12	+ 0·75	− 0·26	−14	43	56·40	−1728·1	+12·4	− 2·4	7	8	47·00	47·42
882	+65	978	3·64 A0p	14	3	2·032	+163·32	+ 0·24	− 0·89	+64	36	51·59	−1722·4	+ 6·5	+ 1·3	11	13	42·74	43·88
883	−26	10095	3·48 K 0	14	3	31·021	+341·43	+ 1·15	+ 0·34	−26	26	31·48	−1720·2	+13·2	−14·4	8	8	43·90	44·28
884	+18	2824	7·62 K 0	14	4	11·115	+284·74	+ 0·03	− 0·24	+18	8	59·07	−1717·1	+11·1	− 0·7	7		40·56	
885	+39	2720	7·90 K 0	14	4	20·706	+252·14	− 0·26	+ 0·09	+38	39	18·52	−1716·4	+ 9·8	− 0·7	11	10	41·69	40·83
886	+50	2047	5·44 M a	14	6	25·286	+224·78	− 0·29	− 0·66	+49	41	36·77	−1707·0	+ 8·9	+ 5·5	9	11	38·86	39·06
887	−26	10158	5·25 K 0	14	9	53·766	+343·92	+ 1·18	− 0·10	−27	1	35·84	−1690·8	+13·8	− 4·2	4		40·17	
888	− 9	3878	4·31 K 0	14	10	13·458	+320·06	+ 0·62	+ 0·05	−10	2	32·20	−1689·3	+12·9	+13·5	7	43	48·77	42·23
889	+70	778	5·36 M a	14	11	7·808	+112·09	+ 1·35	− 0·48	+69	40	0·57	−1685·0	+ 4·8	− 5·0	11		45·58	
890	+ 4	2841	6·62 M a	14	12	21·640	+302·77	+ 0·32	− 0·32	+ 3	34	7·52	−1679·1	+12·4	− 2·0	6	7	43·57	44·09
891	+22	2678	6·40 A 2	14	12	21·855	+277·69	− 0·02	+ 0·28	+22	6	21·54	−1679·2	+11·4	− 1·0	6		39·92	
892	+19	2777	0·24 K 0	14	13	22·872	+281·40	+ 0·02	− 7·75	+19	26	47·45	−1674·3	+11·6	−199·8	1	39	48·45	41·62
893	− 5	3843	4·16 F 5	14	13	23·368	+314·74	+ 0·52	− 0·07	− 5	45	42·35	−1674·3	+13·0	−42·8	6	5	41·26	39·82
894	+57	1498	6·60 F 8	14	14	22·925	+193·82	− 0·08	+ 0·07	+56	55	19·41	−1669·5	+ 8·2	−10·5	4		39·70	
895	+46	1949	4·26 A 0	14	14	29·081	+229·86	− 0·23	− 1·82	+46	19	1·00	−1669·0	+ 9·6	+15·8	8	8	42·66	43·78
896	− 6	3964	6·50 G 0	14	15	21·061	+316·87	+ 0·56	+ 1·68	− 7	18	30·14	−1664·7	+13·2	−24·7	5		45·00	
897	−18	3789	5·74 A0p	14	15	52·047	+332·29	+ 0·87	− 0·46	−18	29	7·52	−1662·3	+13·8	− 4·2	7	6	46·54	47·73
898	−12	4018	4·60 A 2	14	16	23·970	+324·81	+ 0·71	− 0·12	−13	8	31·17	−1659·7	+13·6	+ 2·4	6	38	46·73	42·12
899	+13	2782	5·31 F 0	14	16	50·936	+289·66	+ 0·14	+ 0·71	+13	14	2·70	−1657·5	+12·2	− 3·4	7		40·86	
900	+42	2481	7·20 K 0	14	16	57·386	+239·07	− 0·21	+ 0·32	+42	14	7·96	−1656·9	+10·2	− 7·4	6	8	42·09	41·90

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
901	+31 2605	6·34 A 2	14 17 57·425	+262·48	− 0·11	− 0·12	+30 39 27·78	−1651·9	+11·2	− 0·7	9	38·99
902	+ 8 2857	5·74 A 0	14 21 32·869	+295·80	+ 0·24	+ 0·01	+ 8 28 12·51	−1634·0	+12·8	− 3·1	12 13	41·52 41·05
903	−24 11469	5·39 K 0	14 21 57·092	+342·81	+ 1·08	− 0·40	−24 34 49·40	−1631·9	+14·8	− 2·7	8 9	40·95 42·00
904	−12 4042	6·59 K 0	14 22 34·856	+325·49	+ 0·71	− 0·37	−13 7 40·88	−1628·8	+14·2	+ 0·4	7 8	40·44 40·45
905	+52 1804	4·06 F 8	14 23 29·787	+206·81	− 0·12	− 2·60	+52 4 54·71	−1624·1	+ 9·2	−40·1	12 14	43·49 43·63
906	− 1 2957	4·99 K 0	14 25 37·383	+310·11	+ 0·44	− 0·92	− 2 0 17·54	−1613·1	+13·8	− 0·4	13 58	46·95 42·44
907	+36 2495	6·19 K 0	14 26 12·162	+248·62	− 0·13	− 0·24	+36 25 11·58	−1610·1	+11·1	− 1·0	6 7	39·23 40·37
908	+28 2332	6·95 A 0	14 26 21·130	+264·06	− 0·06	+ 0·11	+28 30 47·98	−1609·3	+11·8	+ 0·2	6	40·44
909	+31 2628	3·78 K 0	14 29 40·512	+259·33	− 0·07	− 0·80	+30 35 22·84	−1591·8	+11·8	+11·7	11 11	40·62 41·54
910	+38 2565	3·00 F 0	14 30 3·881	+242·55	− 0·13	− 0·98	+38 31 32·98	−1589·7	+11·1	+14·9	16 17	43·61 43·13
911	+81 482	7·10 G 5	14 31 5·057	−211·28	+18·28	− 3·86	+81 1 57·01	−1584·3	− 9·2	−13·0	14 15	42·56 42·61
912	+66 855	6·63 F 5	14 32 32·070	+125·32	+ 0·93	+ 0·93	+65 36 47·17	−1576·5	+ 6·0	+ 4·1	17	42·17
913	+50 2095	5·90 K 5	14 32 54·749	+210·23	− 0·08	− 0·48	+49 35 7·89	−1574·4	+ 9·8	+ 4·4	8 10	40·82 40·14
914	+23 2710	6·48 K 0	14 33 51·210	+271·25	+ 0·03	− 0·11	+23 28 0·79	−1569·3	+12·6	+ 1·5	8 9	38·55 39·32
915	−11 3770	6·24 F 8	14 34 20·274	+325·18	+ 0·68	− 5·91	−12 5 39·92	−1566·7	+15·1	+36·0	13 14	44·14 44·59
916	+ 2 2844	6·62 F 8	14 34 56·619	+303·69	+ 0·36	− 0·25	+ 2 29 40·14	−1563·4	+14·2	− 7·2	9 11	38·76 38·80
917	+54 1693	5·52 A 0	14 36 39·997	+190·15	+ 0·06	+ 0·15	+54 14 19·84	−1554·0	+ 9·1	− 2·4	9 9	39·22 38·44
918	+12 2729	5·63 G 5	14 39 19·355	+289·33	+ 0·20	− 1·08	+11 52 30·54	−1539·2	+13·8	−11·8	10 13	41·32 43·04
919	−18 3882	7·00 K 0	14 39 56·463	+337·06	+ 0·88	− 0·35	−19 5 58·30	−1535·7	+16·1	+ 2·6	6 5	45·10 44·64
920	− 5 3936	3·95 F 5	14 40 25·261	+315·53	+ 0·53	+ 0·71	− 5 26 28·52	−1533·0	+15·1	−32·2	16 53	46·30 42·24
921	− 7 3897	6·60 F 5	14 41 34·455	+319·56	+ 0·58	− 1·38	− 8 2 31·49	−1526·5	+15·4	+ 6·4	6	44·08
922	+27 2417	2·70 K 0	14 42 48·168	+262·38	+ 0·01	− 0·38	+27 17 2·61	−1519·4	+12·8	+ 1·7	7	42·16
923	+33 2489	6·47 M a	14 43 8·100	+250·65	− 0·04	+ 0·31	+32 59 57·19	−1517·6	+12·3	− 8·2	8 10	42·80 44·32
924	−22 3844	5·91 K 0	14 43 14·213	+344·29	+ 1·00	+ 0·16	−22 56 32·49	−1517·0	+16·8	− 6·5	6	41·26
925	+ 2 2862	3·76 A 0	14 43 43·106	+304·12	+ 0·38	− 0·74	+ 2 6 9·10	−1514·3	+14·8	− 3·2	10 51	44·94 41·63
926	+15 2758	6·10 M b	14 43 44·525	+283·31	+ 0·16	− 0·58	+15 20 26·90	−1514·1	+13·9	+ 0·9	5 6	41·45 40·45
927	−25 10537	5·39 G 5	14 44 49·295	+350·02	+ 1·10	+ 0·32	−25 52 44·31	−1508·0	+17·2	− 0·1	5 5	45·64 44·44
928	− 0 2886	6·06 A 0	14 46 19·798	+308·32	+ 0·43	− 0·06	− 0 38 26·79	−1499·1	+15·2	+ 1·3	9 10	42·34 41·66
929	+29 2581	5·66 A 2	14 47 49·149	+258·18	+ 0·01	+ 0·16	+28 49 18·46	−1490·5	+12·9	− 0·5	8 10	38·69 38·85
930	−15 3966	2·90 A 3	14 48 6·484	+332·69	+ 0·78	− 0·73	−15 50 5·97	−1488·8	+16·6	− 7·1	9 18	45·57 42·46
931	+37 2580	5·50 K 0	14 48 31·344	+238·61	− 0·04	− 1·79	+37 28 33·54	−1486·4	+12·0	+ 8·7	8 9	38·07 37·78
932	−30 11780	6·43 G 0	14 49 34·095	+360·12	+ 1·28	− 2·56	−30 22 19·93	−1480·3	+18·0	− 3·4	3	44·06
933	+74 595	2·24 K 5	14 50 49·746	− 16·38	+ 4·82	− 0·84	+74 21 35·67	−1472·8	− 0·4	+ 0·9	15 18	42·72 43·37
934	+ 6 2957	6·69 K 0	14 51 11·210	+297·07	+ 0·30	− 0·19	+ 6 26 41·50	−1470·7	+15·0	+ 0·8	7 8	39·89 39·46
935	+83 431	5·73 G 0	14 53 33·138	−411·06	+31·79	+ 9·02	+82 43 7·99	−1456·5	−20·3	−23·2	49 53	45·46 45·53
936	+87 143	7·16 K 0	14 53 35·018	−1731·74	+296·52	− 1·43	+87 25 19·73	−1456·4	−86·4	+ 1·8	64 64	37·75 37·82
937	+41 2539	7·21 A 2	14 54 6·597	+226·38	− 0·02	− 0·06	+41 20 13·28	−1453·2	+11·6	+ 3·6	5 7	38·84 37·87
938	+22 2764	6·24 A 0	14 54 48·344	+270·49	+ 0·10	− 0·10	+21 45 21·57	−1449·0	+13·9	− 2·5	6	41·44
939	+ 0 3277	5·71 K 0	14 54 59·206	+307·27	+ 0·42	+ 0·42	+ 0 1 57·95	−1447·9	+15·8	− 2·7	6 7	43·30 42·61
940	+14 2812	6·77 K 2	14 55 54·285	+283·78	+ 0·19	− 0·25	+14 14 13·00	−1442·3	+14·6	+ 0·1	5 4	48·03 48·18
941	− 7 3938	* A 0	14 58 17·821	+321·04	+ 0·58	− 0·44	− 8 19 18·29	−1427·8	+16·7	− 0·8	9 18	49·32 47·24
942	− 7 3943	6·85 G 5	14 59 23·772	+320·82	+ 0·58	− 0·24	− 8 8 56·07	−1420·9	+16·8	+ 2·4	6 5	44·14 42·28
943	+40 2840	3·63 G 5	15 0 3·684	+226·37	+ 0·01	− 0·40	+40 35 12·98	−1416·9	+12·0	− 3·3	10 14	45·74 46·02
944	+72 664	6·66 G 0	15 0 22·310	+ 16·75	+ 3·36	− 8·63	+71 57 38·30	−141·50	+ 1·2	+ 8·9	12 13	45·26 45·28
945	−21 4030	6·11 K 0	15 3 33·678	+345·77	+ 0·92	+ 0·45	−21 50 19·15	−1395·0	+18·4	− 6·6	7	43·30
946	+48 2262	5·59 A 0	15 3 46·384	+199·38	+ 0·10	− 0·68	+48 20 36·17	−1393·7	+10·8	+ 2·9	19 22	45·40 46·08
947	−12 4198	7·32 A 0	15 3 49·363	+328·99	+ 0·68	+ 0·09	−12 42 51·92	−1393·4	+17·6	− 2·8	6 7	43·30 42·76
948	+19 2924	6·00 A 0	15 5 2·670	+274·78	+ 0·16	+ 0·29	+18 38 3·01	−1385·7	+14·8	− 6·3	8 10	39·34 38·86
949	+ 6 3001	6·22 G 5	15 5 11·319	+297·70	+ 0·32	− 0·06	+ 5 41 22·83	−1384·7	+16·0	− 2·5	8 10	38·96 39·27
950	+26 2656	5·73 K0p	15 6 14·162	+258·97	+ 0·08	+ 0·02	+26 29 30·42	−1378·2	+14·0	− 2·1	8 9	39·97 38·36

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*941 4^m8 to 5^m9

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
951	+34	2604	6·89	K 0	15	6	17·436	+242·13	+ 0·04	− 0·25	+33	53	48·04	−1377·8	+13·1	0·0	7		37·90	
952	+50	2146	6·27	K 0	15	6	44·212	+190·45	+ 0·15	− 0·06	+50	14	43·68	−1375·0	+10·4	− 2·8	7		41·04	
953	+63	1167	6·75	F 2	15	6	52·850	+113·85	+ 0·98	+ 0·02	+63	18	27·28	−1374·0	+ 6·4	− 0·2	7	10	42·92	43·54
954	− 4	3818	7·15	K 0	15	6	57·031	+316·19	+ 0·52	− 1·13	− 5	12	15·56	−1373·6	+17·0	− 6·6	6	7	39·79	40·61
955	−25	10758	5·94	K 0	15	7	20·792	+355·16	+ 1·06	− 0·24	−26	8	36·05	−1371·0	+19·2	− 1·9	6		43·62	
956	+43	2475	6·55	A 5	15	12	12·536	+213·89	+ 0·07	− 0·66	+43	13	56·61	−1339·8	+11·9	+ 4·6	10		39·87	
957	− 8	3925	2·74	B 8	15	14	18·760	+323·55	+ 0·59	− 0·66	− 9	11	59·07	−1326·0	+18·0	− 2·3	17	65	46·33	41·99
958	+37	2625	7·08	F 8	15	14	27·047	+231·09	+ 0·06	− 2·26	+37	15	8·10	−1325·1	+12·8	+ 0·4	5	6	40·02	39·26
959	+69	789	6·50	A 0	15	14	28·681	+ 44·37	+ 2·31	+ 0·41	+69	7	46·32	−1324·9	+ 2·8	− 1·3	12		46·18	
960	+21	2755	5·66	G 5	15	16	9·909	+269·09	+ 0·14	− 0·09	+20	45	16·48	−1313·8	+15·1	− 2·3	6		37·63	
961	+10	2823	6·71	F 8	15	16	17·967	+288·42	+ 0·26	− 0·63	+10	36	32·35	−1313·0	+16·2	+ 0·1	7		40·19	
962	−15	4083	6·11	F 5	15	18	13·343	+335·28	+ 0·72	+ 0·16	−15	22	10·21	−1300·2	+18·9	+ 1·8	6		39·45	
963	+ 1	3067	5·48	K 0	15	18	29·142	+305·74	+ 0·40	− 0·31	+ 0	53	46·47	−1298·4	+17·2	−11·2	6	7	38·46	38·04
964	− 6	4148	7·43	K 2	15	18	29·652	+318·81	+ 0·53	+ 0·09	− 6	26	2·04	−1298·3	+18·0	+ 0·9	5	5	40·65	38·47
965	−26	10842	6·78	K 0	15	19	57·468	+358·38	+ 1·04	+ 0·24	−26	30	39·92	−1288·6	+20·3	− 0·8	8	7	42·70	41·87
966	+72	679	3·14	A 2	15	20	47·465	− 8·83	+ 3·59	− 0·48	+72	0	42·92	−1283·0	− 0·2	+ 1·9	12	14	42·97	43·05
967	−11	3940	5·78	K 0	15	21	7·400	+329·54	+ 0·64	− 0·28	−12	11	32·43	−1280·8	+18·7	− 4·6	6		37·63	
968	− 0	2961	6·10	F 0	15	21	8·793	+308·85	+ 0·43	+ 0·50	− 0	50	43·25	−1280·6	+17·6	− 3·1	7		37·03	
969	+25	2916	6·26	K 5	15	25	29·715	+258·04	+ 0·12	− 0·04	+25	16	28·36	−1251·1	+15·0	− 2·9	11	13	40·39	39·71
970	+55	1756	6·30	A 2	15	27	39·172	+155·08	+ 0·42	− 0·13	+55	21	55·94	−1236·3	+ 9·2	+ 2·5	8	7	37·62	37·07
971	−20	4246	6·10	A 2	15	27	42·556	+346·78	+ 0·84	+ 0·10	−20	33	27·97	−1235·9	+20·2	− 2·7	8		37·97	
972	+31	2742	6·35	A 2	15	28	21·329	+242·84	+ 0·10	− 0·22	+31	27	22·58	−1231·5	+14·2	− 1·9	8		39·58	
973	+ 9	3055	6·46	F 2	15	28	29·611	+291·10	+ 0·28	+ 0·24	+ 8	44	55·76	−1230·5	+17·0	− 0·2	15		42·05	
974	+27	2512	2·31	A 0	15	32	34·047	+253·13	+ 0·12	+ 0·90	+26	52	55·72	−1202·2	+15·0	− 9·1	6	9	40·65	42·36
975	−14	4237	4·02	K 0	15	32	43·470	+335·24	+ 0·68	+ 0·43	−14	37	27·18	−1201·1	+19·8	+ 0·1	17	72	47·24	42·17
976	+81	517	6·97	K 0	15	32	50·402	−363·67	+19·42	+ 0·22	+80	56	21·11	−1200·3	−21·0	+ 1·6	13	12	45·03	44·74
977	+77	592	5·33	K 5	15	32	51·474	−176·03	+ 9·17	− 1·49	+77	30	59·92	−1200·2	−10·0	+ 0·7	10	11	45·98	45·39
978	+11	2826	6·11	G 5	15	33	30·564	+285·64	+ 0·26	− 0·29	+11	25	50·84	−1195·7	+16·9	− 1·9	7		40·90	
979	−18	4118	5·53	G 5	15	36	1·464	+344·85	+ 0·77	+ 0·59	−19	8	18·38	−1177·8	+20·6	− 8·4	6	8	38·51	38·88
980	+23	2838	7·62	K 0	15	36	13·895	+261·77	+ 0·15	− 0·47	+22	50	13·68	−1176·5	+15·6	+ 0·3	7		38·76	
981	+47	2253	5·78	F 0	15	36	39·922	+191·32	+ 0·20	+ 0·81	+46	57	42·39	−1173·4	+11·6	−12·6	16	20	44·58	44·66
982	+35	2711	6·19	K 0	15	36	52·830	+231·88	+ 0·11	0·00	+34	50	13·18	−1171·8	+14·0	− 2·4	9		40·15	
983	+37	2665	5·07	B 8	15	37	29·611	+226·09	+ 0·11	− 0·13	+36	47	49·34	−1167·5	+13·6	− 1·4	10		39·28	
984	− 5	4143	7·42	K 0	15	39	5·539	+319·35	+ 0·50	− 0·10	− 6	17	6·73	−1156·1	+19·2	− 0·2	7		39·20	
985	−14	4266	6·44	K 0	15	40	36·405	+336·47	+ 0·66	− 0·05	−14	53	2·40	−1145·3	+20·4	−10·3	8	8	42·46	42·35
986	+52	1898	5·48	A0p	15	41	29·051	+163·95	+ 0·36	− 0·70	+52	31	5·19	−1138·9	+10·1	+ 2·5	7		46·37	
987	+ 2	2989	5·80	G 5	15	41	30·770	+302·19	+ 0·36	− 0·56	+ 2	40	27·91	−1138·8	−18·4	−15·7	6		38·80	
988	+ 6	3088	2·75	K 0	15	41	48·121	+296·42	+ 0·30	+ 0·92	+ 6	34	53·40	−1136·6	+18·0	+ 4·6	16	64	45·59	41·80
989	+17	2906	5·89	A 0	15	42	25·752	+272·73	+ 0·20	− 0·20	+17	25	12·85	−1132·1	+16·6	− 0·8	5		45·28	
990	+15	2911	3·74	A 2	15	43	52·661	+276·46	+ 0·22	+ 0·48	+15	34	37·40	−1121·6	+16·9	− 4·8	5	27	49·07	44·37
991	+ 7	3023	4·42	G 0	15	44	0·976	+292·72	+ 0·30	− 1·52	+ 7	30	30·54	−1120·7	+18·0	− 7·2	5		42·70	
992	−23	12525	6·66	A 0	15	45	28·442	+356·12	+ 0·86	− 0·40	−23	40	52·22	−1110·0	+21·8	− 3·2	6		47·28	
993	+78	527	4·34	A 2	15	45	47·784	−214·31	+ 9·76	+ 0·52	+77	56	57·37	−1107·6	−12·8	− 0·4	10	12	48·13	48·52
994	− 3	3829	5·61	A 3	15	46	19·470	+314·47	+ 0·44	− 0·24	− 3	39	59·92	−1103·8	+19·4	+ 0·3	4	6	45·47	44·48
995	+28	2477	*	G0p	15	46	30·704	+247·22	+ 0·14	− 0·04	+28	18	32·28	−1102·4	+15·3	− 2·2	5		45·52	
996	− 2	4052	3·63	A 0	15	47	0·456	+313·73	+ 0·44	− 0·58	− 3	16	43·00	−1098·9	+19·4	− 2·8	7	13	47·59	46·08
997	+ 4	3069	3·75	A 2	15	48	19·278	+298·25	+ 0·32	+ 0·85	+ 4	37	36·33	−1089·3	+18·5	+ 6·3	3	10	48·21	44·22
998	+83	453	7·32	A 2	15	48	28·083	−620·06	+34·32	+ 0·43	+83	6	3·42	−1088·2	−37·6	0·0	31	25	45·60	45·57
999	+20	3166	5·76	K 5	15	52	22·343	+265·01	+ 0·18	− 0·58	+20	27	22·27	−1059·3	+16·6	+ 3·9	6	7	40·81	40·06
1000	+16	2849	3·86	F 5	15	54	8·362	+275·02	+ 0·21	+ 2·13	+15	49	35·01	−1046·2	+17·3	−128·6	24	85	46·06	41·96

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*995 5ᵐ8 to 13ᵐ8

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
1001	+14 2969	5·66 K 0	15 54 56·093	+277·67	+ 0·22	− 0·85	+14 33 22·71	−1040·3	+17·5	+ 8·0	7	41·64
1002	−25 11228	3·00 B 2	15 55 49·299	+363·09	+ 0·88	− 0·06	−25 58 17·78	−1033·6	+22·9	− 2·5	8 10	43·35 44·77
1003	− 5 4210	7·42 K 0	15 57 6·934	+319·37	+ 0·46	− 0·08	− 5 59 10·49	−1023·9	+20·2	− 1·7	6 7	40·02 39·38
1004	−22 4068	2·54 B 0	15 57 22·317	+354·89	+ 0·78	− 0·05	−22 28 50·71	−1022·0	+22·4	− 2·7	14 16	44·85 44·69
1005	+31 2805	6·68 K 0	15 58 44·048	+236·07	+ 0·14	+ 0·48	+31 42 31·10	−1011·7	+15·0	− 5·6	11 10	40·05 39·20
1006	−25 11295	5·10 K 0	16 0 19·004	+363·13	+ 0·86	− 0·53	−25 43 38·55	− 999·8	+23·2	− 4·6	7	40·21
1007	+37 2708	5·85 *	16 1 28·927	+220·54	+ 0·16	+ 0·06	+36 46 7·17	− 990·9	+14·2	− 2·5	8 9	38·12 37·84
1008	+59 1697	6·20 M a	16 2 14·506	+109·40	+ 0·77	− 0·30	+59 32 51·19	− 985·1	+ 7·1	− 2·7	8 9	38·60 39·92
1009	−19 4307	2·90 B 1	16 2 31·496	+348·95	+ 0·70	− 0·02	−19 40 12·46	− 982·9	+22·4	− 2·2	16 18	44·26 45·08
1010	−12 4425	5·64 A 0	16 4 49·582	+333·53	+ 0·55	− 0·34	−12 36 44·51	− 965·4	+21·4	− 3·6	8 9	40·11 41·26
1011	−23 12731	5·79 B 9	16 5 44·202	+358·48	+ 0·77	− 0·11	−23 33 12·36	− 958·3	+23·2	− 3·1	9	38·28
1012	+17 2964	5·34 G 5	16 5 49·003	+271·04	+ 0·20	− 0·24	+17 10 43·83	− 957·8	+17·5	− 1·2	15	43·10
1013	+45 2374	7·35 K 0	16 6 25·449	+187·67	+ 0·23	− 0·06	+45 30 41·82	− 953·1	+12·2	+ 0·2	8 9	39·61 40·72
1014	+ 6 3169	6·02 G 5	16 6 43·171	+293·88	+ 0·30	+ 1·57	+ 6 31 16·89	− 950·8	+19·0	−72·3	10 12	42·87 41·98
1015	+41 2673	6·85 F 5	16 7 36·399	+204·05	+ 0·18	− 1·89	+41 13 27·74	− 944·0	+13·2	+ 6·5	8	39·02
1016	+27 2595	6·68 K 0	16 8 0·079	+247·54	+ 0·16	− 0·18	+26 52 17·78	− 941·0	+16·1	+ 4·0	8	39·25
1017	− 1 3149	6·58 K 0	16 11 3·544	+310·12	+ 0·38	− 0·37	− 1 20 57·17	− 917·3	+20·2	− 1·6	7 6	42·33 43·13
1018	− 3 3903	3·03 M a	16 11 43·338	+314·74	+ 0·40	− 0·31	− 3 34 0·37	− 912·1	+20·6	−14·6	15 76	44·43 41·37
1019	+11 2947	7·43 F 0	16 12 29·723	+282·82	+ 0·25	+ 0·01	+11 36 56·13	− 904·7	+18·6	− 8·3	6	43·81
1020	− 7 4242	5·56 G 0	16 12 53·888	+324·60	+ 0·46	+ 1·53	− 8 14 16·14	− 902·9	+21·3	−50·8	8 7	45·14 44·66
1021	+75 586	6·51 K 2	16 13 45·952	−149·39	+ 5·48	− 1·11	+75 20 6·62	− 896·1	− 9·6	+ 3·0	10 9	46·15 46·67
1022	+23 2916	6·59 K 0	16 14 8·671	+255·95	+ 0·18	− 0·12	+23 14 44·67	− 893·1	+16·9	− 1·4	7 8	42·07 41·75
1023	+53 1856	7·04 F 0	16 14 33·851	+146·35	+ 0·43	+ 0·10	+53 21 37·97	− 889·9	+ 9·8	− 6·8	4	47·48
1024	− 4 4086	3·34 K 0	16 15 40·361	+316·92	+ 0·40	+ 0·55	− 4 34 19·92	− 881·2	+20·9	+ 3·9	7 17	48·76 46·25
1025	+32 2702	6·93 G 0	16 15 48·857	+232·55	+ 0·16	+ 1·20	+31 55 14·94	− 880·1	+15·4	+28·9	4	45·99
1026	−18 4260	6·89 A 0	16 16 40·892	+348·05	+ 0·62	− 0·07	−18 42 30·64	− 873·2	+23·0	+ 0·4	4	47·69
1027	−25 11485	3·10 B 1	16 18 8·698	+364·80	+ 0·76	− 0·07	−25 28 27·98	− 861·7	+24·2	− 2·4	7 6	45·06 45·65
1028	+46 2169	3·91 B 5	16 18 14·068	+180·49	+ 0·25	− 0·12	+46 25 53·65	− 861·0	+12·0	+ 3·7	7 8	46·80 46·03
1029	+ 1 3215	4·80 F 0	16 19 32·296	+304·91	+ 0·33	− 1·06	+ 1 8 41·91	− 850·7	+20·2	+ 5·0	6	46·82
1030	+19 3086	3·79 F 0	16 19 42·744	+265·02	+ 0·19	− 0·35	+19 16 8·90	− 849·3	+17·6	+ 4·4	7 21	45·08 41·96
1031	− 2 4179	7·00 F 2	16 22 3·210	+312·37	+ 0·36	− 0·27	− 2 22 25·77	− 830·7	+20·8	− 1·0	9	39·06
1032	+61 1591	2·89 G 5	16 23 18·457	+ 81·63	+ 0·91	− 0·32	+61 37 37·16	− 820·8	+ 5·6	+ 5·8	16 16	41·11 41·57
1033	−26 11359	1·22 *	16 26 20·204	+367·99	+ 0·73	− 0·02	−26 19 21·59	− 796·5	+24·8	− 2·3	6	43·50
1034	+29 2834	7·11 A 2	16 26 32·359	+238·82	+ 0·16	− 0·12	+29 11 5·00	− 794·9	+16·2	+ 0·5	7	42·47
1035	−14 4433	5·75 G 0	16 26 57·058	+338·94	+ 0·50	+ 0·20	−14 26 33·46	− 791·5	+22·9	+ 1·6	10	42·22
1036	−24 12695	4·87 B 3	16 27 9·921	+364·60	+ 0·70	− 0·06	−25 0 24·28	− 789·8	+24·6	− 2·9	6	45·70
1037	+ 6 3236	6·94 F 5	16 27 23·792	+294·25	+ 0·27	+ 0·03	+ 6 4 43·59	− 788·0	+19·9	+ 0·6	6	44·34
1038	+21 2934	2·81 K 0	16 28 4·147	+258·64	+ 0·18	− 0·72	+21 35 50·19	− 782·6	+17·5	− 1·6	16 76	44·26 40·75
1039	+35 2828	6·47 K 5	16 29 12·723	+219·94	+ 0·17	+ 0·05	+35 19 53·98	− 773·3	+15·0	− 3·2	7	42·36
1040	+61 1598	5·85 A 0	16 31 42·899	+ 84·61	+ 0·82	+ 0·18	+60 55 40·09	− 753·1	+ 5·9	− 1·3	16 24	44·00 44·25
1041	−27 11015	2·91 B 0	16 32 45·942	+373·61	+ 0·73	− 0·05	−28 6 50·01	− 744·6	+25·4	− 2·5	4 5	42·18 41·87
1042	+17 3053	6·27 A 0	16 33 11·704	+269·00	+ 0·20	− 0·04	+17 9 32·40	− 741·1	+18·4	− 0·7	7 6	39·40 38·39
1043	−10 4350	2·70 B 0	16 34 24·123	+330·31	+ 0·42	+ 0·08	−10 28 3·14	− 731·3	+22·6	+ 2·4	15 69	44·18 41·48
1044	+80 519	6·95 G 0	16 34 28·027	−390·76	+11·28	+ 3·21	+79 53 39·60	− 730·7	−26·3	− 8·3	9 11	46·10 45·92
1045	+46 2194	5·95 G 5	16 34 43·482	+175·17	+ 0·26	− 0·15	+46 42 49·17	− 728·6	+12·0	+ 0·4	6 7	44·50 44·80
1046	+23 2965	6·89 K 0	16 34 46·106	+254·56	+ 0·17	+ 0·73	+22 58 12·08	− 728·3	+17·4	−14·4	7	43·09
1047	− 6 4467	6·00 A 0	16 35 20·653	+321·39	+ 0·38	− 0·04	− 6 26 20·02	− 723·6	+22·0	− 1·0	9	45·51
1048	+13 3177	6·20 F 2	16 35 29·618	+276·74	+ 0·22	− 0·26	+13 47 13·50	− 722·4	+19·0	− 6·3	6	41·57
1049	+43 4624	7·15 A 2	16 35 55·832	+188·29	+ 0·22	+ 0·16	+43 39 48·42	− 718·9	+12·9	+ 3·8	5 6	40·31 40·52
1050	+56 1907	5·44 G 5	16 36 59·625	+121·30	+ 0·51	0·00	+56 6 45·10	− 710·1	+ 8·4	+ 6·5	8 10	39·15 39·63

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1007 F5 + A2 *1033 Ma + A3

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
1051	+39 3029	3·61 K 0	16 41 10·759	+205·40	+ 0·18	+ 0·29	+39 0 59·06	− 675·8	+14·3	− 8·3	22 21	43·84 43·58
1052	−28 12358	5·96 A 2	16 41 52·325	+375·47	+ 0·68	− 0·22	−28 25 5·48	− 670·1	+25·9	− 0·6	6 7	40·28 39·74
1053	+34 2830	5·90 F 2	16 42 0·927	+221·95	+ 0·16	− 0·59	+34 7 47·02	− 668·9	+15·4	+ 4·8	11 14	42·34 42·96
1054	+ 8 3271	5·38 K 2	16 43 25·738	+288·07	+ 0·23	− 0·02	+ 8 40 20·04	− 657·2	+20·0	+ 1·0	10	38·95
1055	+ 2 3175	6·04 A 2	16 44 38·358	+302·57	+ 0·28	− 0·16	+ 2 9 11·84	− 647·2	+21·0	− 1·2	16 18	43·17 42·60
1056	− 4 4165	7·26 G 5	16 46 12·633	+317·14	+ 0·32	− 0·01	− 4 25 39·55	− 634·2	+22·0	−10·0	9 12	39·08 39·71
1057	−21 4422	7·60 M a	16 46 35·868	+357·97	+ 0·52	− 0·08	−21 45 57·41	− 631·0	+24·9	− 2·0	6 7	38·04 38·41
1058	+53 1897	7·13 K 0	16 48 14·014	+138·63	+ 0·38	− 0·28	+53 0 7·94	− 617·4	+ 9·7	− 0·3	11	39·73
1059	+30 2884	5·86 K 5	16 48 41·721	+234·21	+ 0·16	− 0·06	+29 53 26·34	− 613·6	+16·4	− 0·6	8 9	38·42 38·66
1060	+35 2878	7·70 K 5	16 50 23·145	+216·14	+ 0·17	+ 0·10	+35 34 17·83	− 599·5	+15·2	+ 1·2	6 6	41·68 43·35
1061	+18 3261	6·87 F 5	16 50 28·138	+265·54	+ 0·18	+ 0·08	+18 8 39·77	− 598·8	+18·6	− 4·0	5 7	39·52 39·83
1062	+82 498	4·40 G 5	16 51 0·837	−614·98	+16·48	+ 0·62	+82 7 21·49	− 594·1	−42·7	+ 0·4	140 137	41·30 41·21
1063	− 5 4374	5·35 K 0	16 51 55·164	+320·92	+ 0·32	− 0·26	− 6 4 25·48	− 586·6	+22·4	− 2·3	5 7	43·76 42·70
1064	+75 608	6·84 F 0	16 54 27·242	−187·36	+ 3·98	+ 0·84	+75 28 20·85	− 565·4	−13·0	− 2·0	6	46·52
1065	+14 3155	6·51 G 5	16 55 14·499	+275·43	+ 0·19	− 0·61	+13 57 33·38	− 558·9	+19·4	+ 6·5	5 7	41·49 42·23
1066	+ 9 3298	3·42 K 0	16 55 18·006	+285·97	+ 0·22	− 1·99	+ 9 27 4·85	− 558·3	+20·2	− 0·9	13 41	48·23 44·48
1067	+24 3095	6·36 K 0	16 55 37·674	+248·93	+ 0·16	+ 0·03	+24 27 26·80	− 555·6	+17·6	− 3·1	5 6	42·76 42·40
1068	+65 1157	4·82 F 5	16 55 44·562	+ 29·31	+ 1·05	+ 3·77	+65 12 39·27	− 554·5	+ 2·2	+ 4·4	8 10	42·46 43·14
1069	+31 2947	3·92 A 0	16 58 22·476	+229·93	+ 0·16	− 0·40	+30 59 55·57	− 532·4	+16·3	+ 2·8	13 15	43·38 42·27
1070	−18 4381	6·37 K 0	16 58 55·579	+351·24	+ 0·42	− 0·28	−18 48 49·06	− 527·9	+24·8	− 2·4	9 10	38·56 38·76
1071	+19 3220	6·13 A 0	17 2 30·636	+261·07	+ 0·16	+ 0·05	+19 40 0·76	− 497·5	+18·6	− 0·5	13 11	39·93 39·38
1072	−21 4512	6·29 A 0	17 3 12·478	+358·34	+ 0·42	− 0·14	−21 29 48·37	− 491·6	+25·4	− 8·2	11	38·47
1073	+49 2583	6·32 K 0	17 3 30·002	+158·93	+ 0·26	+ 0·30	+48 52 20·44	− 489·1	+11·4	− 7·7	12 11	40·40 40·02
1074	+44 2652	6·36 A 0	17 3 33·397	+182·71	+ 0·21	0·00	+43 52 44·80	− 488·6	+13·0	− 0·1	15 17	43·55 42·96
1075	−26 11896	6·20 A 0	17 3 47·169	+371·80	+ 0·49	+ 0·03	−26 26 48·42	− 486·7	+26·4	− 1·9	9 10	40·72 41·40
1076	− 0 3230	6·02 A 0	17 5 38·742	+309·63	+ 0·25	− 0·15	− 1 0 53·60	− 470·9	+22·0	− 3·8	6 7	38·56 38·28
1077	+31 2967	6·61 K 2	17 6 6·357	+228·42	+ 0·16	− 0·02	+31 16 12·71	− 467·0	+16·3	− 1·6	7 8	39·17 39·35
1078	+28 2667	6·99 F 2	17 6 22·536	+237·35	+ 0·16	− 0·16	+28 17 57·83	− 465·3	+16·9	−13·1	5 6	37·36 37·90
1079	−10 4445	5·58 F 5	17 7 1·884	+331·34	+ 0·30	+ 0·38	−10 27 34·29	− 459·1	+23·6	−10·1	20 48	48·47 45·99
1080	−15 4467	2·63 A 2	17 7 30·408	+343·82	+ 0·35	+ 0·26	−15 39 54·00	− 455·1	+24·6	+ 9·4	7 43	38·00 37·91
1081	−14 4565	7·26 G 0	17 9 7·915	+341·18	+ 0·34	− 0·11	−14 33 36·08	− 441·2	+24·4	− 5·9	8 9	41·04 41·10
1082	+ 8 3367	6·39 K 0	17 9 20·404	+289·11	+ 0·20	+ 0·18	+ 7 57 14·88	− 439·4	+20·7	+ 1·1	8	37·61
1083	+21 3070	6·93 K 0	17 11 31·147	+255·90	+ 0·16	+ 0·07	+21 29 18·31	− 420·8	+18·4	− 0·9	14 15	41·12 40·82
1084	+63 1336	5·47 A 3	17 12 6·410	+ 51·56	+ 0·68	+ 0·20	+62 55 51·78	− 415·8	+ 3·8	+ 4·8	10 15	41·37 41·83
1085	+14 3207	3·48 M b	17 12 21·945	+273·64	+ 0·17	− 0·08	+14 26 45·01	− 413·6	+19·6	0·0	9 8	38·68 38·32
1086	− 9 4525	7·06 F 5	17 12 55·965	+329·81	+ 0·28	+ 0·07	− 9 45 12·04	− 408·8	+23·6	− 2·2	6	38·04
1087	+ 1 3408	* B 8	17 13 59·358	+304·44	+ 0·22	− 0·05	+ 1 15 53·22	− 399·7	+21·8	− 1·6	13 15	42·17 42·62
1088	+39 3098	7·37 F 5	17 15 14·446	+199·20	+ 0·14	− 0·36	+39 31 8·08	− 388·9	+14·3	+13·9	8 9	38·45 39·24
1089	+11 3156	5·28 K 5	17 16 15·805	+282·03	+ 0·17	+ 0·01	+10 55 2·76	− 380·2	+20·2	− 9·6	14 15	41·44 41·39
1090	−17 4773	6·04 A 0	17 16 58·553	+349·24	+ 0·32	− 0·08	−17 42 20·81	− 374·1	+25·1	− 2·6	9 8	40·10 39·78
1091	+71 835	6·81 K 2	17 16 59·205	− 92·99	+ 1·66	− 0·07	+71 50 41·90	− 373·9	− 6·6	− 0·6	10 14	40·52 41·29
1092	−24 13292	3·37 B 3	17 18 56·132	+368·50	+ 0·37	− 0·02	−24 57 5·38	− 357·2	+26·5	− 2·1	8 9	40·10 39·27
1093	−21 4597	5·96 K 0	17 21 44·436	+358·95	+ 0·32	− 0·15	−21 23 46·89	− 333·3	+25·8	− 3·4	8	40·40
1094	+50 2400	7·87 F 2	17 23 12·254	+147·50	+ 0·24	− 0·20	+50 28 11·61	− 320·4	+10·6	− 6·6	7 8	45·69 45·06
1095	− 1 3329	6·31 F 5	17 23 22·000	+311·03	+ 0·20	+ 0·48	− 1 36 35·42	− 319·0	+22·4	+ 4·7	6 7	46·18 44·67
1096	+80 544	5·91 K 2	17 23 22·650	−455·02	+ 5·80	+ 0·64	+80 10 58·50	− 318·9	−32·6	0·0	8 11	45·36 45·12
1097	+16 3183	6·69 F 2	17 23 26·632	+268·43	+ 0·15	− 0·13	+16 25 34·40	− 318·4	+19·4	+ 2·9	5 6	41·40 41·27
1098	+ 7 3368	5·98 *	17 23 54·053	+289·63	+ 0·17	− 0·01	+ 7 38 16·65	− 314·4	+20·9	− 0·9	7	44·69
1099	+27 2809	6·36 A 5	17 24 0·556	+240·32	+ 0·14	+ 0·02	+26 55 15·23	− 313·5	+17·4	+ 1·6	8	44·58
1100	+ 4 3422	4·44 K 0	17 24 1·903	+297·68	+ 0·18	− 0·01	+ 4 10 55·93	− 313·3	+21·5	+ 0·6	20 91	43·69 40·72

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1087 5m7 to 6m4 *1098 A0 +-G

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
1101	+58 1731	6·52 A 2	17 25 19·659	+ 90·13	+ 0·38	− 0·11	+58 41 35·32	− 302·0	+ 6·6	+ 1·2	9 13	42·23 41·88
1102	+52 2065	2·99 G 0	17 29 18·013	+135·76	+ 0·24	− 0·21	+52 20 15·70	− 267·7	+ 9·8	+ 1·3	15 15	43·08 42·67
1103	− 5 4461	5·69 A 2	17 30 49·579	+320·58	+ 0·19	− 0·32	− 5 42 34·64	− 254·4	+32·2	−10·2	14 12	41·65 40·84
1104	−11 4411	5·68 B 8	17 31 59·347	+333·62	+ 0·21	− 0·10	−11 12 35·27	− 244·3	+24·2	+ 0·6	4 7	38·81 38·44
1105	+12 3252	2·14 A 5	17 32 36·645	+277·69	+ 0·14	+ 0·80	+12 35 43·65	− 238·9	+20·2	−22·6	19 100	44·61 41·34
1106	+41 2856	7·16 A 0	17 33 5·095	+192·21	+ 0·16	− 0·02	+40 56 25·62	− 234·8	+14·0	+ 1·4	5 7	43·82 43·74
1107	+12 3256	7·04 K 5	17 33 31·241	+278·93	+ 0·14	0·00	+12 4 38·76	− 231·1	+20·2	+ 0·5	5 6	45·36 44·57
1108	+30 3033	5·76 A 2	17 34 42·404	+228·11	+ 0·14	+ 0·21	+30 48 53·38	− 220·7	+16·6	− 1·1	7 9	39·85 40·56
1109	−15 4622	5·92 A 5	17 34 43·934	+344·26	+ 0·22	− 0·08	−15 32 31·58	− 220·5	+25·0	− 0·5	9 10	39·70 39·39
1110	+48 2542	5·54 K 0	17 35 19·074	+156·57	+ 0·19	+ 0·29	+48 36 49·52	− 215·4	+11·4	+ 5·8	7 8	37·69 38·31
1111	+24 3218	5·67 A 0	17 35 27·374	+247·24	+ 0·13	− 0·11	+24 20 18·14	− 214·2	+18·0	− 0·1	11 12	43·14 42·52
1112	+36 2912	6·85 K 0	17 36 34·657	+207·99	+ 0·14	+ 0·40	+36 46 28·42	− 204·4	+15·1	+ 0·3	7 9	39·58 40·36
1113	+ 3 3465	6·56 K 0	17 36 48·006	+299·00	+ 0·15	− 1·21	+ 3 35 0·34	− 202·5	+21·8	−10·3	9 10	40·57 40·68
1114	+46 2349	3·79 B 3	17 38 3·040	+169·44	+ 0·17	− 0·09	+46 1 55·18	− 191·6	+12·3	+ 0·4	18 16	45·15 44·97
1115	+ 4 3489	2·94 K 0	17 41 0·055	+296·65	+ 0·14	− 0·28	+ 4 35 11·08	− 166·0	+21·6	+15·9	14 38	48·25 44·44
1116	+27 2888	3·48 G 5	17 44 30·171	+237·19	+ 0·12	− 2·38	+27 45 0·70	− 135·5	+17·2	−74·4	8 7	42·98 42·18
1117	−22 4423	6·24 K 0	17 44 44·189	+362·45	+ 0·18	+ 0·01	−22 27 38·80	− 133·4	+26·4	− 1·6	7	46·53
1118	−14 4770	6·07 B 9	17 44 45·549	+342·32	+ 0·16	− 0·10	−14 42 31·46	− 133·2	+24·9	− 2·6	9 8	45·18 45·19
1119	+17 3334	5·58 A 0	17 44 55·474	+264·74	+ 0·12	+ 0·05	+17 42 50·83	− 131·7	+19·3	− 1·2	7 8	43·15 42·33
1120	+ 2 3403	3·74 A 0	17 45 23·040	+300·98	+ 0·14	− 0·16	+ 2 43 29·06	− 127·7	+21·9	− 7·1	3 18	48·21 41·52
1121	+80 555	7·10 M a	17 46 7·764	−473·06	+ 2·46	− 0·70	+80 18 5·64	− 121·2	−34·4	+ 0·4	6 10	42·68 40·34
1122	+25 3353	5·34 K 0	17 46 47·383	+243·31	+ 0·12	− 0·06	+25 38 17·92	− 115·5	+17·7	− 4·3	8 9	38·57 39·58
1123	+ 9 3485	6·79 K 5	17 47 47·164	+284·13	+ 0·12	− 0·27	+ 9 51 44·40	− 106·7	+20·7	− 5·2	5 7	38·21 37·45
1124	+86 269	4·44 A 0	17 48 18·033	−1945·16	+18·16	+ 1·13	+86 36 34·34	− 102·2	−141·6	+ 5·5	175 183	40·70 40·57
1125	− 1 3412	6·45 K 0	17 49 24·260	+310·18	+ 0·12	− 0·12	− 1 13 31·77	− 92·7	+22·6	− 0·4	9	38·02
1126	− 7 4523	6·87 G 5	17 52 15·037	+325·44	+ 0·12	− 0·35	− 7 43 31·15	− 67·8	+23·8	− 5·7	9 10	41·98 41·44
1127	+22 3237	5·69 K 2	17 53 44·648	+252·08	+ 0·11	− 0·04	+22 28 13·81	− 54·7	+18·4	− 0·3	9 10	39·46 40·46
1128	+55 1995	6·10 F 0	17 54 28·533	+109·47	+ 0·16	+ 0·37	+55 58 32·27	− 48·3	+ 8·0	+11·6	6 8	44·22 42·20
1129	+51 2282	2·42 K 5	17 55 26·560	+139·42	+ 0·15	− 0·13	+51 29 38·92	− 39·8	+10·2	− 2·0	6 7	44·11 45·02
1130	+33 2995	6·78 K 0	17 55 34·518	+219·22	+ 0·12	+ 0·14	+33 24 19·30	− 38·7	+16·0	− 1·4	6	43·10
1131	+62 1586	7·22 K 0	17 55 55·638	+ 49·44	+ 0·20	− 0·72	+62 36 47·77	− 35·6	+ 3·6	+ 8·7	8 8	47·93 48·12
1132	+14 3374	7·29 A 0	17 56 3·959	+272·74	+ 0·11	+ 0·07	+14 30 51·48	− 34·4	+19·9	− 2·1	5 6	43·40 42·27
1133	− 9 4632	3·50 K 0	17 56 16·354	+330·33	+ 0·10	− 0·06	− 9 46 8·23	− 32·6	+24·0	−12·0	9 44	46·82 43·28
1134	+52 2119	7·71 A 2	17 56 57·732	+134·95	+ 0·14	+ 0·06	+52 13 18·20	− 26·5	+ 9·8	− 2·8	5 6	46·78 45·08
1135	+ 4 3570	4·81 B 3	17 57 47·100	+297·12	+ 0·10	− 0·01	+ 4 22 11·87	− 19·4	+21·6	− 1·6	6 7	38·46 40·05
1136	+ 2 3458	3·95 B5p	17 58 8·400	+300·48	+ 0·10	− 0·04	+ 2 55 56·56	− 16·3	+21·9	− 1·0	6 50	44·56 40·60
1137	−17 4987	6·31 K 2	17 58 28·688	+348·58	+ 0·10	− 0·02	−17 9 24·07	− 13·3	+25·4	− 0·7	5 6	44·41 45·10
1138	+44 2812	7·22 F 2	18 1 2·307	+177·24	+ 0·12	− 0·44	+44 13 57·97	+ 9·1	+13·0	− 6·0	11 12	39·07 39·19
1139	+39 3310	7·46 A 0	18 2 28·094	+197·28	+ 0·12	− 0·10	+39 28 37·26	+ 21·6	+14·4	− 3·0	12 13	39·61 40·37
1140	−30 15215	3·07 K 0	18 2 35·718	+385·80	+ 0·05	− 0·41	−30 25 32·13	+ 22·7	+28·2	−18·5	4	36·86
1141	+79 571	5·80 F 5	18 3 53·456	−450·33	− 0·32	+ 1·66	+79 59 59·26	+ 24·1	−32·8	+11·9	8 9	45·42 45·18
1142	−21 4855	6·22 B 1	18 4 11·305	+359·82	+ 0·06	− 0·08	−21 27 2·44	+ 36·6	+26·2	− 0·1	8 7	43·59 43·02
1143	+ 9 3564	3·73 A 3	18 4 58·659	+284·84	+ 0·08	− 0·43	+ 9 33 18·11	+ 43·5	+20·8	+ 8·2	13 117	47·28 41·02
1144	+15 3365	6·78 K 0	18 5 6·475	+269·25	+ 0·10	− 0·08	+15 54 40·71	+ 44·7	+19·6	−14·9	6	41·44
1145	+26 3178	6·00 A 3	18 5 48·466	+241·92	+ 0·10	− 0·05	+26 5 19·43	+ 50·8	+17·6	+ 3·0	9 8	43·24 44·58
1146	+49 2732	6·31 A 0	18 5 51·228	+149·81	+ 0·10	− 0·05	+49 42 8·22	+ 51·2	+10·9	+ 1·5	6 7	43·76 43·31
1147	− 2 4558	6·85 G 5	18 6 2·020	+314·13	+ 0·07	+ 0·07	− 2 54 59·10	+ 52·8	+22·9	+ 0·2	6 7	46·40 45·58
1148	−13 4863	6·50 K 0	18 6 52·957	+340·49	+ 0·06	+ 0·01	−13 56 39·87	+ 60·1	+24·8	+ 0·1	6	39·64
1149	+ 6 3639	7·13 K 0	18 7 16·750	+292·83	+ 0·08	− 0·30	+ 6 11 44·39	+ 63·7	+21·2	+ 2·8	9 11	39·38 39·95
1150	−21 4908	4·01 B8p	18 10 46·341	+358·76	+ 0·02	+ 0·01	−21 4 25·27	+ 94·2	+26·1	− 0·1	19 20	42·60 42·80

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
1151	+30	3162	6·98	K 0	18	13	58·501	+229·14	+ 0·10	+ 0·23	+30	22	53·13	+ 122·2	+16·7	+ 1·2	11	12	39·89	39·95
1152	−17	5112	5·98	K 5	18	14	16·988	+349·10	+ 0·01	− 0·03	−17	23	34·08	+ 120·4	+25·4	− 2·2	8	9	39·64	39·30
1153	− 9	4678	6·30	A 5	18	14	38·885	+330·31	+ 0·03	− 0·01	− 9	46	38·21	+ 128·0	+24·0	− 6·4	16	16	42·67	43·11
1154	+13	3593	6·18	B 5	18	15	45·482	+274·69	+ 0·08	− 0·07	+13	45	23·82	+ 137·6	+20·0	− 2·6	10	9	39·71	38·84
1155	+24	3381	5·49	K 5	18	17	7·129	+246·82	+ 0·09	+ 0·06	+24	25	25·79	+ 149·6	+17·9	− 0·3	9	8	39·31	39·52
1156	−29	14834	2·84	K 0	18	17	47·512	+383·77	− 0·07	+ 0·31	−29	51	3·39	+ 155·5	+27·9	− 2·9	4	3	37·86	37·62
1157	+ 3	3680	4·92	G 5	18	18	22·213	+299·52	+ 0·05	− 0·04	+ 3	21	11·17	+ 160·5	+21·7	+ 1·0	10	11	43·53	42·91
1158	− 2	4599	3·42	K 0	18	18	43·385	+314·11	+ 0·03	− 3·72	− 2	54	42·83	+ 163·6	+22·8	−69·7	23	121	46·69	42·04
1159	+21	3411	3·92	K 0	18	21	33·805	+254·27	+ 0·08	+ 1·37	+21	44	46·46	+ 188·4	+18·4	−24·1	7	11	40·19	40·88
1160	−20	5134	4·96	*	18	22	22·300	+357·24	− 0·05	+ 0·04	−20	34	12·91	+ 195·3	+25·8	− 2·9	8	11	40·53	39·65
1161	+ 7	3682	5·69	*	18	23	14·386	+288·64	+ 0·05	− 0·06	+ 8	0	8·92	+ 202·9	+20·9	− 0·6	13	14	40·77	40·41
1162	+29	3259	5·71	A 2	18	24	2·959	+231·22	+ 0·09	+ 0·03	+29	47	55·93	+ 210·0	+16·8	− 2·2	12	15	41·62	42·42
1163	−25	13149	2·94	K 0	18	24	53·062	+370·55	− 0·10	− 0·33	−25	27	2·19	+ 217·2	+26·8	−18·3	6		38·81	
1164	−26	13192	6·28	A 3	18	24	58·910	+374·39	− 0·10	− 0·01	−26	47	19·52	+ 218·1	+27·1	− 4·1	9	9	43·03	42·92
1165	−14	5071	4·73	A 3	18	26	20·793	+341·90	− 0·04	0·00	−14	35	57·85	+ 229·9	+24·7	− 0·3	8	81	44·98	41·23
1166	−10	4713	5·80	B 3	18	28	39·263	+332·69	− 0·03	− 0·03	−10	49	55·27	+ 249·9	+24·0	− 1·9	11	10	39·72	39·32
1167	+16	3529	5·67	A 0	18	28	50·907	+267·07	+ 0·06	− 0·32	+16	53	32·97	+ 251·6	+19·2	− 2·7	10	14	40·44	40·22
1168	+41	3075	7·17	F 5	18	29	21·885	+191·84	+ 0·08	− 0·26	+41	4	9·96	+ 256·1	+13·8	+ 2·3	8	10	39·78	39·55
1169	+83	536	6·15	A 2	18	30	47·717	−793·69	−10·02	+ 0·57	+83	8	32·77	+ 268·5	−57·4	− 3·1	57	53	46·70	46·24
1170	+52	2232	6·43	B 9	18	31	2·618	+137·40	+ 0·02	− 0·16	+52	4	38·25	+ 270·7	+ 9·8	+ 0·5	6	10	40·44	42·28
1171	+38	3213	6·90	F 8	18	31	10·918	+200·91	+ 0·08	− 0·04	+38	47	44·95	+ 271·8	+14·4	− 8·8	10	11	38·53	38·73
1172	+56	2113	4·95	F8p	18	31	42·742	+103·49	− 0·06	− 0·11	+57	0	23·90	+ 276·4	+ 7·4	− 0·7	6		41·15	
1173	+20	3847	6·44	A 2	18	32	10·382	+258·06	+ 0·06	− 0·01	+20	25	34·32	+ 280·4	+18·6	− 0·6	6	7	38·15	39·22
1174	+46	2508	6·66	A 0	18	32	22·805	+169·49	+ 0·06	− 0·01	+46	10	44·17	+ 282·2	+12·2	+ 1·4	6	9	39·46	40·94
1175	+10	3573	6·38	A 0	18	32	26·350	+281·97	+ 0·04	− 0·01	+10	51	4·20	+ 282·7	+20·3	− 0·9	4	6	37·89	38·15
1176	+67	1079	6·81	K 5	18	32	26·820	− 15·81	− 0·50	− 0·28	+67	44	16·36	+ 282·8	− 1·2	− 1·0	7	7	44·27	44·11
1177	− 8	4638	4·06	K 0	18	32	29·123	+326·58	− 0·04	− 0·14	− 8	16	47·29	+ 283·1	+23·5	−31·2	5	51	43·19	39·75
1178	+ 0	3975	7·02	F 8	18	34	36·697	+305·24	0·00	+ 0·10	+ 0	54	26·26	+ 301·5	+22·0	+ 2·0	10		38·93	
1179	−17	5271	6·80	F 2	18	34	57·304	+348·39	− 0·10	0·00	−17	16	31·44	+ 304·5	+25·0	− 0·1	10	12	40·58	40·68
1180	+38	3238	0·14	A 0	18	35	14·428	+201·41	+ 0·08	+ 1·70	+38	44	6·31	+ 307·0	+14·5	+28·3	9	12	39·09	39·02
1181	+62	1637	5·60	A 0	18	37	6·384	+ 54·22	+ 0·26	− 0·14	+62	28	50·49	+ 323·1	+ 3·8	+ 4·2	14	20	42·41	42·76
1182	− 9	4796	4·74	F 0	18	39	32·099	+328·41	− 0·07	+ 0·03	− 9	6	7·15	+ 344·0	+23·5	0·0	23	108	47·46	42·12
1183	+31	3332	6·47	A 0	18	39	47·902	+226·46	+ 0·08	+ 0·01	+31	34	5·58	+ 346·3	+16·2	+ 0·4	9	11	38·86	39·19
1184	−25	13394	5·76	B 8	18	41	45·157	+368·78	− 0·21	+ 0·02	−25	3	45·74	+ 363·1	+26·4	− 2·7	7	8	41·46	40·86
1185	−27	13170	3·30	B 8	18	42	31·899	+374·37	− 0·24	+ 0·39	−27	2	38·55	+ 369·8	+26·7	+ 0·1	7	8	38·21	39·50
1186	−22	4854	5·80	K 2	18	43	19·655	+361·55	− 0·20	+ 0·21	−22	26	46·56	+ 376·6	+25·8	− 0·2	8	9	39·28	39·43
1187	+18	3817	6·27	K 5	18	44	29·634	+263·07	+ 0·05	+ 0·16	+18	39	4·24	+ 386·7	+18·8	− 2·6	9	11	39·75	39·92
1188	− 4	4582	4·47	G 0	18	44	31·253	+318·34	− 0·06	− 0·08	− 4	48	10·92	+ 386·9	+22·7	− 1·7	29	113	46·77	41·94
1189	−13	5119	6·51	K 2	18	47	41·604	+339·03	− 0·14	− 0·07	−13	37	52·74	+ 414·1	+24·1	− 0·5	9		39·08	
1190	+26	3368	6·92	A 2	18	47	58·384	+242·54	+ 0·06	− 0·01	+26	21	56·32	+ 415·9	+17·2	+ 2·9	11	11	40·40	41·13
1191	+ 7	3862	7·06	K 5	18	48	0·415	+290·36	+ 0·00	− 0·16	+ 7	23	58·51	+ 416·8	+20·6	− 3·9	9		38·20	
1192	+33	3223	*	**	18	48	13·918	+221·48	+ 0·07	− 0·02	+33	18	12·34	+ 418·7	+15·7	− 0·2	22	23	45·04	44·34
1193	− 3	4390	6·89	A 2	18	48	28·109	+314·91	− 0·06	− 0·34	− 3	19	13·05	+ 420·7	+22·3	− 5·5	4	9	39·42	39·65
1194	− 3	4392	6·04	A 3	18	48	44·533	+315·03	− 0·06	− 0·03	− 3	22	40·34	+ 423·0	+22·4	− 2·7	11	13	42·52	43·07
1195	+21	3582	5·33	B 9	18	50	8·177	+256·30	+ 0·05	− 0·08	+21	21	48·61	+ 435·0	+18·1	− 1·2	12	13	40·82	40·74
1196	+36	3307	5·51	B 3	18	51	58·648	+209·55	+ 0·06	− 0·02	+36	54	29·00	+ 450·6	+14·8	− 0·6	13		40·11	
1197	−26	13595	2·14	B 3	18	52	9·897	+371·84	− 0·30	+ 0·10	−26	21	37·97	+ 452·3	+26·3	− 5·5	11	12	40·49	40·50
1198	−16	5078	5·58	F 5	18	52	38·238	+345·72	− 0·18	− 0·24	−16	26	19·49	+ 456·3	+24·4	−18·7	8	9	40·81	40·23
1199	+ 4	3916	4·50	A 5	18	53	43·976	+297·93	− 0·03	+ 0·29	+ 4	8	12·65	+ 465·6	+21·0	+ 3·6	27	97	47·93	42·54
1200	− 6	4976	5·04	K 0	18	54	22·939	+320·77	− 0·10	+ 0·41	− 5	54	45·62	+ 471·1	+22·6	− 3·7	10		40·04	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1160 K0 + A0 *1161 G0 + A3 *1192 3m4 to 4m3 **1192 B8p + B2p

No.	BD or CD No.	M + Sp	R A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
1201	+ 2 3738	5·65 B 8	18 54 45·682	+301·73	− 0·04	− 0·06	+ 2 28 5·04	+ 474·3	+21·2	− 1·4	8	40·41
1202	+13 3838	5·94 A3p	18 56 29·136	+275·41	+ 0·02	− 0·05	+13 50 17·24	+ 489·0	+19·4	− 5·5	7 9	38·46 39·40
1203	−32 3286	3·30 A0p	18 57 4·272	+224·45	+ 0·06	− 0·07	+32 37 10·71	+ 494·0	+15·8	+ 0·1	11	40·68
1204	+40 3544	6·12 B 5	18 57 8·302	+196·30	+ 0·05	+ 0·02	+40 36 34·29	+ 494·5	+13·8	− 0·3	7 7	39·37 39·35
1205	+14 3736	4·21 K 0	18 57 21·122	+272·65	+ 0·02	− 0·39	+14 59 56·73	+ 496·3	+19·2	− 7·4	20 100	47·22 41·82
1206	+82 572	6·83 A 0	18 59 20·858	−648·17	−14·62	+ 0·53	+82 18 6·06	+ 513·2	−45·8	+ 2·2	18 19	42·57 42·48
1207	−30 16575	2·71 A 2	18 59 25·853	+381·75	− 0·41	− 0·12	−29 57 11·54	+ 513·9	+26·8	− 0·1	4 5	37·94 38·48
1208	+19 3888	6·25 K 0	19 0 41·769	+261·44	+ 0·04	− 0·03	+19 35 12·36	+ 524·6	+18·3	− 0·8	11 12	39·81 39·46
1209	−23 15008	6·90 A 0	19 1 13·193	+361·96	− 0·31	− 0·06	−22 58 18·42	+ 529·1	+25·3	+ 0·3	10	39·97
1210	+45 2825	6·82 B 9	19 3 5·330	+174·89	+ 0·01	+ 0·30	+45 50 41·08	+ 544·8	+12·2	+ 1·2	7 9	39·40 39·23
1211	+13 3899	3·02 A 0	19 3 6·642	+275·77	0·00	− 0·08	+13 47 16·54	+ 545·0	+19·2	− 9·4	11	40·94
1212	− 5 4876	3·55 B 9	19 3 35·685	+318·48	− 0·12	− 0·17	− 4 57 32·29	+ 549·0	+22·2	− 8·8	17 76	47·10 42·05
1213	− 1 3649	6·72 B 8	19 3 59·771	+310·52	− 0·09	+ 0·10	− 1 25 27·48	+ 552·5	+21·6	− 0·9	12 13	42·41 41·97
1214	+28 3193	5·46 A 5	19 4 38·523	+237·50	+ 0·05	+ 0·55	+28 32 54·73	+ 557·9	+16·5	+ 8·7	13 13	40·02 41·03
1215	+ 5 4040	5·37 F 2	19 6 32·925	+293·89	− 0·04	− 0·10	+ 5 59 35·68	+ 573·8	+20·4	− 7·8	15	40·54
1216	−21 5275	3·02 F 2	19 6 47·418	+356·72	− 0·31	− 0·01	−21 6 17·29	+ 575·9	+24·8	− 3·7	13 11	41·99 40·69
1217	−12 5311	5·62 K 0	19 10 27·795	+335·25	− 0·22	+ 0·07	−12 22 5·16	+ 606·5	+23·2	− 2·6	13 13	42·52 42·29
1218	+56 2209	5·24 K 0	19 10 43·743	+112·99	− 0·24	+ 0·44	+56 46 24·24	+ 608·7	+ 7·7	+ 4·4	10 11	43·75 43·48
1219	−25 13866	4·93 F 5	19 12 28·487	+367·47	− 0·42	+ 0·32	−25 20 40·36	+ 623·3	+25·4	− 3·0	5 6	43·90 43·37
1220	+67 1129	3·24 K 0	19 12 32·265	− 0·35	− 1·16	+ 1·60	+67 34 25·05	+ 624·0	− 0·1	+ 9·3	14 11	46·68 46·24
1221	+20 4088	5·62 A 3	19 13 7·970	+258·26	+ 0·04	+ 0·24	+21 8 36·01	+ 628·7	+17·8	+ 0·9	7 8	40·68 40·68
1222	−19 5379	5·03 K 0	19 14 42·575	+351·02	− 0·32	− 0·09	−19 2 36·79	+ 641·9	+24·1	− 1·6	8 7	46·36 45·90
1223	+11 3790	5·14 A 5	19 15 28·119	+281·59	− 0·02	− 0·04	+11 30 13·74	+ 648·2	+19·3	+ 1·8	3 5	43·94 44·62
1224	+53 2216	3·98 K 0	19 15 56·776	+137·97	− 0·14	+ 0·61	+53 16 31·26	+ 652·1	+ 9·4	+12·3	7 6	44·88 44·26
1225	+37 3413	6·19 A 0	19 17 15·442	+211·08	+ 0·05	+ 0·08	+37 21 7·32	+ 662·9	+14·4	+ 1·5	5 6	43·23 42·81
1226	− 5 4936	5·10 G 5	19 17 52·675	+319·48	− 0·17	+ 0·74	− 5 30 39·20	+ 668·0	+21·8	+ 4·7	5 7	44·62 44·35
1227	+65 1345	4·63 A 2	19 20 24·818	+ 30·49	− 0·97	+ 0·21	+65 37 5·22	+ 688·9	+ 2·0	+ 4·1	13	42·42
1228	+83 552	6·34 A 2	19 21 38·987	−769·91	−26·82	+ 0·44	+83 22 10·28	+ 699·0	−52·6	+ 1·0	10	46·55
1229	+29 3584	4·86 B 3	19 22 9·155	+236·47	+ 0·06	+ 0·09	+29 31 20·26	+ 703·1	+16·0	+ 1·0	9 10	40·58 40·59
1230	−14 5428	5·81 K 0	19 22 32·045	+338·50	− 0·29	+ 0·49	−13 59 52·09	+ 706·3	+22·9	+ 5·2	7	41·97
1231	+ 2 3879	3·44 F 0	19 22 58·517	+300·74	− 0·10	+ 1·67	+ 3 0 47·93	+ 709·9	+20·4	+ 8·5	14 67	44·33 41·28
1232	−22 5105	5·56 K 0	19 23 20·220	+357·47	− 0·42	+ 0·23	−21 52 38·60	+ 712·8	+24·2	− 0·2	6 7	43·15 42·66
1233	+76 734	* N b	19 23 22·327	−211·27	− 5·26	− 0·29	+76 27 41·90	+ 713·1	−14·6	+ 0·2	7 8	45·60 45·48
1234	+19 4017	6·04 K 5	19 24 17·364	+262·46	+ 0·02	− 0·08	+19 47 26·85	+ 720·6	+17·7	− 4·7	7 10	40·70 40·90
1235	+44 3133	6·72 G 5	19 24 24·997	+183·41	0·00	− 0·46	+44 49 51·13	+ 721·7	+12·2	− 7·7	13 12	43·98 42·93
1236	+62 1716	6·46 K 5	19 25 51·825	+ 68·92	− 0·66	+ 0·23	+62 27 16·09	+ 733·5	+ 4·6	+ 5·0	10	40·08
1237	− 0 3760	6·52 K 2	19 26 44·409	+307·02	− 0·13	+ 0·02	+ 0 8 30·66	+ 740·5	+20·6	− 0·9	11	40·76
1238	−27 14004	5·53 K 0	19 26 46·642	+370·83	− 0·54	+ 0·23	−27 5 23·04	+ 740·9	+25·0	− 4·5	6 7	39·22 39·29
1239	+33 3480	6·64 K 0	19 28 24·694	+225·01	+ 0·06	+ 0·02	+33 37 22·84	+ 754·1	+15·0	− 2·0	9 10	38·78 39·66
1240	+51 2605	3·94 A 2	19 28 26·625	+151·01	− 0·11	+ 0·19	+51 37 20·12	+ 754·4	+10·0	+13·0	19 17	44·40 44·03
1241	+27 3410	3·24 *	19 28 42·220	+241·95	+ 0·05	− 0·03	+27 51 12·41	+ 756·5	+16·2	− 0·4	13 14	41·76 41·33
1242	+ 5 4177	7·16 F 8	19 29 15·260	+295·07	− 0·08	+ 0·68	+ 5 39 41·97	+ 761·0	+19·7	− 0·8	8 12	40·95 40·28
1243	+70 1073	6·25 K 2	19 31 24·809	− 47·87	− 2·26	− 0·21	+70 52 51·30	+ 778·4	− 3·4	+ 5·7	14 14	42·78 42·57
1244	+47 2870	6·70 A 5	19 33 14·459	+170·78	− 0·04	− 0·21	+48 3 17·30	+ 793·1	+11·2	− 7·5	9 11	41·33 41·22
1245	−25 14184	4·66 B 9	19 33 39·917	+364·50	− 0·54	+ 0·51	−24 59 43·72	+ 796·5	+24·2	− 2·0	9	42·91
1246	−18 5432	5·87 K 0	19 34 9·318	+347·95	− 0·40	+ 0·10	−18 20 37·51	+ 800·5	+23·1	− 1·3	6	39·36
1247	− 7 5006	5·04 B 0	19 34 12·065	+322·67	− 0·23	0·00	− 7 8 24·78	+ 800·8	+21·4	− 0·4	23 70	46·20 43·08
1248	+21 3849	6·80 A 3	19 34 57·324	+258·18	+ 0·03	+ 0·16	+21 53 33·61	+ 806·9	+17·0	− 0·9	7 8	38·56 38·32
1249	+49 3062	4·64 F 5	19 35 5·995	+161·07	− 0·08	− 0·30	+50 6 14·47	+ 808·0	+10·5	+25·4	12 11	42·68 42·15
1250	+ 3 0974	6·37 B 3	19 36 18·753	+300·36	− 0·12	− 0·06	+ 3 15 59·83	+ 817·7	+19·8	+ 0·4	9 10	38·58 39·81

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1233 5^m8 to 7^m2 *1241 K0 + A0

No.	BD or CD No		M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
	°			h m s	s	s	s	° ′ ″	″	″	″		
1251	+54	2193	5·86 F 5	19 37 33·681	+134·46	− 0·22	+ 0·43	+54 51 19·47	+ 827·6	+ 8·7	+16·6	8 14	39·31 38·75
1252	+11	3954	6·26 B 9	19 39 52·011	+281·42	− 0·04	− 0·05	+12 4 28·38	+ 846·0	+18·4	− 0·6	13	40·46
1253	+44	3234	2·97 A 0	19 43 24·556	+187·05	0·00	+ 0·44	+45 0 27·64	+ 874·0	+12·0	+ 4·8	9 10	40·04 40·11
1254	+10	4043	2·80 K 2	19 43 52·889	+285·09	− 0·06	+ 0·08	+10 29 24·18	+ 877·7	+18·5	+ 0·3	20 64	44·98 42·13
1255	+18	4240	3·78 *	19 45 9·415	+267·45	0·00	+ 0·02	+18 24 34·47	+ 887·7	+17·3	+ 1·2	11 51	45·91 41·84
1256	+25	3972	6·04 K 0	19 45 42·697	+250·87	+ 0·05	+ 0·56	+25 15 33·94	+ 892·0	+16·2	− 2·7	10 12	40·58 40·77
1257	−29	16546	6·10 F 0	19 46 4·428	+373·37	− 0·71	+ 0·89	−28 54 47·27	+ 894·9	+24·2	−10·9	4 5	38·72 38·30
1258	+ 7	4252	6·39 B 3	19 47 51·864	+291·07	− 0·08	0·00	+ 7 46 29·78	+ 908·9	+18·7	0·0	8 10	39·68 41·09
1259	+ 8	4236	0·89 A 5	19 48 20·370	+289·05	− 0·08	+ 3·60	+ 8 44 2·21	+ 912·6	+18·6	+38·7	12 17	44·06 41·37
1260	− 3	4742	5·64 *	19 50 41·593	+314·03	− 0·22	+ 0·14	− 3 14 43·28	+ 930·8	+20·1	+ 1·6	14 14	41·02 40·96
1261	−24	15668	6·28 K 0	19 51 18·305	+360·10	− 0·60	− 0·99	−24 4 56·73	+ 935·5	+23·0	−41·5	8	38·83
1262	+34	3778	6·82 A 0	19 51 53·962	+226·37	+ 0·07	+ 0·02	+34 27 8·07	+ 940·1	+14·4	− 0·7	11 13	41·14 40·78
1263	− 8	5154	5·78 B 3	19 51 55·260	+324·66	− 0·30	+ 0·02	− 8 21 32·42	+ 940·4	+20·7	− 2·4	9	38·49
1264	+40	3931	6·82 B 3	19 51 56·421	+203·94	+ 0·05	− 0·03	+41 13 27·77	+ 940·5	+12·9	− 1·5	10 11	40·12 40·18
1265	+ 6	4357	3·90 K 0	19 52 51·374	+294·37	+ 0·10	+ 0·26	+ 6 16 52·98	+ 947·5	+18·8	−47·8	14 52	47·01 42·70
1266	+58	2013	5·13 K 2	19 54 58·208	+114·55	− 0·44	− 0·15	+58 42 43·46	+ 963·8	+ 7·1	− 2·1	8 9	38·56 39·03
1267	+19	4229	3·71 K 5	19 56 31·900	+266·33	+ 0·01	+ 0·42	+19 21 17·97	+ 975·7	+16·7	+ 2·8	21 86	44·28 41·87
1268	+10	4126	6·55 K 0	19 56 49·787	+284·30	− 0·06	+ 0·07	+11 10 6·48	+ 978·0	+17·9	+ 0·6	10 11	40·90 40·88
1269	+ 0	4375	6·35 G 5	19 56 50·107	+304·81	− 0·17	+ 0·12	+ 1 14 21·75	+ 978·1	+19·2	+ 5·3	10	40·48
1270	+22	3873	5·70 F 0	19 57 1·746	+257·93	+ 0·07	− 0·55	+22 57 50·36	+ 979·5	+16·2	+ 0·5	10 11	41·20 41·16
1271	−28	16355	4·60 M b	19 59 35·173	+368·53	− 0·75	+ 0·27	−27 51 1·13	+ 999·0	+23·1	+ 2·0	8 9	39·08 38·83
1272	+29	3872	5·68 K 0	20 1 33·370	+241·42	+ 0·08	+ 5·19	+29 45 49·63	+1014·0	+15·0	−53·0	9 11	38·69 38·60
1273	−21	5609	7·11 G 5	20 2 1·549	+352·57	− 0·58	+ 0·33	−21 27 23·17	+1017·5	+22·0	− 3·2	7 9	40·02 39·18
1274	−27	14515	7·08 A 0	20 2 9·115	+365·86	− 0·74	+ 0·04	−26 57 22·05	+1018·3	+22·8	− 0·1	3	40·08
1275	+19	4277	5·26 K 0	20 2 56·327	+265·88	+ 0·02	+ 0·17	+19 50 46·37	+1024·3	+16·4	+ 7·9	8 9	39·57 39·26
1276	+47	3004	5·98 A 0	20 2 58·936	+179·40	− 0·02	+ 0·06	+48 5 11·25	+1024·7	+11·0	+ 0·1	5 7	38·90 38·72
1277	− 4	5013	6·56 K 0	20 3 34·053	+315·79	− 0·25	+ 0·27	− 4 13 19·20	+1029·1	+19·6	− 4·4	6	38·55
1278	+35	3959	5·52 K 0	20 4 30·434	+224·73	+ 0·08	− 1·91	+35 50 6·36	+1036·1	+13·8	−43·8	7 8	37·54 37·93
1279	+61	1970	5·57 K 0	20 4 44·992	+ 93·70	− 0·72	+ 1·69	+61 51 58·61	+1037·9	+ 5·6	+ 7·3	8 11	39·09 39·30
1280	+ 8	4344	6·50 F 5	20 5 25·745	+288·74	− 0·08	+ 0·28	+ 9 15 11·91	+1043·0	+17·8	+ 2·2	7	38·70
1281	+84	451	6·61 A 2	20 6 53·268	−878·83	−55·00	− 0·86	+84 31 36·69	+1053·9	−54·7	− 4·1	72 63	44·20 44·21
1282	− 1	3911	3·37 A 0	20 8 43·472	+309·25	− 0·22	+ 0·22	− 0 58 16·20	+1067·5	+18·9	+ 0·7	13 47	39·24 38·10
1283	−13	5608	5·88 F 5	20 9 38·598	+332·89	− 0·42	+ 1·31	−12 45 53·62	+1074·3	+20·2	−19·3	8	38·59
1284	+67	1235	6·79 B 3	20 10 43·715	+ 27·26	− 1·80	− 0·23	+68 7 18·47	+1082·2	+ 1·4	− 0·3	8 10	40·69 40·20
1285	+51	2796	6·35 K 2	20 11 8·197	+167·05	− 0·08	− 0·16	+51 18 44·20	+1085·2	+10·0	− 1·5	10	40·42
1286	+ 4	4395	6·57 G 5	20 13 36·780	+298·69	− 0·14	− 0·33	+ 4 25 37·35	+1103·4	+17·9	− 5·5	10	38·34
1287	−12	5685	3·77 G 5	20 15 16·855	+332·35	− 0·43	+ 0·41	−12 42 4·69	+1115·6	+20·0	+ 0·6	8 28	47·04 44·36
1288	−19	5776	5·46 K 0	20 16 30·611	+346·01	− 0·58	+ 0·03	−19 16 34·15	+1124·5	+20·6	− 0·7	7 8	39·44 39·12
1289	+34	3967	5·18 F5p	20 16 43·710	+230·43	+ 0·10	+ 0·01	+34 49 31·56	+1126·1	+13·6	− 0·9	11	38·71
1290	− 6	5451	6·66 K 5	20 17 46·476	+319·92	− 0·31	− 0·55	− 6 31 8·58	+1133·6	+18·5	− 8·3	9	38·91
1291	+14	4263	6·34 G 5	20 18 0·940	+279·04	− 0·02	− 0·08	+14 24 36·76	+1135·3	+16·5	+ 0·7	10 11	39·40 39·06
1292	−15	5629	3·25 *	20 18 12·154	+336·69	− 0·48	+ 0·26	−14 56 26·79	+1136·7	+20·0	+ 0·3	13 41	43·05 41·98
1293	+25	4215	7·10 K 2	20 20 25·595	+253·68	+ 0·07	− 0·01	+26 8 12·92	+1152·6	+14·9	− 1·1	7 9	38·93 39·34
1294	+39	4159	2·32 F8p	20 20 25·870	+215·30	+ 0·10	0·00	+40 5 44·27	+1152·6	+12·6	+ 0·1	14 16	41·79 41·09
1295	+42	3721	6·33 K 0	20 21 11·951	+206·27	+ 0·08	+ 0·44	+42 49 15·54	+1158·1	+12·0	+ 3·5	10	38·99
1296	−29	17049	5·97 K 0	20 22 23·329	+367·12	− 0·89	+ 0·08	−28 49 37·15	+1166·7	+21·5	+ 1·9	7	37·85
1297	+16	4259	6·17 K 0	20 24 6·050	+273·98	0·00	+ 0·06	+17 9 2·46	+1178·8	+15·9	− 1·6	14	39·71
1298	−18	5685	5·20 B 8	20 24 27·619	+343·19	− 0·58	+ 0·08	−18 22 37·97	+1181·3	+20·0	− 1·0	10 12	39·26 38·76
1299	−26	15036	6·56 F 8	20 25 1·569	+359·36	− 0·80	+ 0·14	−25 46 22·70	+1185·4	+20·9	+ 3·2	7 9	39·73 39·40
1300	+56	2421	6·21 A 0	20 25 10·977	+144·79	− 0·26	+ 0·13	+56 28 23·21	+1186·5	+ 8·3	+ 0·9	15 14	41·46 41·58

Positi.n 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1255 Ma + A0 *1260 F0p + A *1292 G0 + A0

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
1301	+ 7	4477	6·26	K 0	20	25	41·454	+291·70	− 0·10	+ 0·24	+ 8	16	14·02	+1190·0	+16·9	+ 1·5	12		41·06	
1302	−22	5442	6·22	K 5	20	26	35·436	+351·86	− 0·70	+ 0·08	−22	33	31·17	+1196·3	+20·4	− 2·6	12		41·42	
1303	−10	5423	5·82	G 5	20	29	39·424	+326·09	− 0·40	+ 2·02	−10	1	32·32	+1217·7	+18·6	+10·2	13		40·65	
1304	+48	3154	5·57	M a	20	29	46·103	+185·07	+ 0·02	+ 0·07	+49	3	2·90	+1218·5	+10·4	− 3·0	6	7	41·51	40·83
1305	+72	957	6·42	K 2	20	30	14·402	− 25·82	− 3·50	− 0·14	+72	21	44·59	+1221·8	− 1·8	− 1·6	16	17	46·71	46·32
1306	+10	4321	3·98	B 5	20	30	49·397	+286·53	− 0·06	+ 0·04	+11	7	55·69	+1225·8	+16·2	− 1·7	18	50	47·11	43·35
1307	+ 4	4486	6·68	K 0	20	31	30·545	+298·61	− 0·15	+ 0·06	+ 4	43	36·03	+1230·5	+16·9	− 0·6	9		39·85	
1308	+83	588	6·16	A 2	20	34	13·796	−603·31	−39·99	+ 1·43	+83	27	16·89	+1249·3	−34·7	− 1·6	15	16	43·56	43·79
1309	+14	4369	3·72	F 5	20	35	12·075	+280·55	− 0·02	+ 0·73	+14	25	12·14	+1255·9	+15·6	− 3·0	1	11	36·90	37·16
1310	+20	4658	4·78	A 0	20	36	17·241	+267·45	+ 0·05	+ 0·44	+21	1	28·00	+1263·3	+14·9	+ 0·8	11	20	48·65	46·41
1311	+23	4084	5·04	B 5	20	36	21·106	+261·28	+ 0·08	+ 0·04	+23	56	22·11	+1263·7	+14·5	− 0·2	7		41·70	
1312	+12	4411	6·06	K 5	20	36	22·333	+283·12	− 0·04	− 0·04	+13	8	18·50	+1263·9	+15·8	− 0·4	7		42·15	
1313	− 5	5335	6·62	K 0	20	36	27·550	+316·59	− 0·32	− 0·02	− 5	6	23·12	+1264·4	+17·6	+ 2·1	5	6	43·53	42·40
1314	+15	4222	3·86	B 8	20	37	18·763	+278·21	0·00	+ 0·41	+15	44	3·86	+1270·2	+15·4	+ 0·1	1	11	35·71	40·30
1315	+78	716	6·78	B 3	20	38	1·881	−235·89	−12·80	− 0·34	+79	15	14·30	+1275·0	−13·6	+ 0·8	6	10	42·38	42·49
1316	+31	4181	5·90	*	20	39	0·953	+242·82	+ 0·14	+ 0·02	+32	7	42·51	+1281·7	+13·4	− 1·5	7		40·04	
1317	+44	3541	1·33	A2p	20	39	43·485	+204·51	+ 0·12	0·00	+45	6	3·01	+1286·4	+11·2	+ 0·5	9	10	41·83	41·63
1318	+19	4501	7·07	A 5	20	42	31·813	+269·80	+ 0·06	− 0·06	+20	18	28·74	+1305·2	+14·6	− 3·9	9	10	40·52	40·84
1319	−25	15018	4·26	F 8	20	43	8·346	+355·47	− 0·84	− 0·40	−25	27	5·82	+1309·2	+19·3	−15·5	7		40·18	
1320	+33	4018	2·64	K 0	20	44	10·838	+239·91	+ 0·16	+ 2·83	+33	46	51·08	+1316·1	+12·9	+33·0	8		38·74	
1321	+52	2799	6·43	K 0	20	44	54·168	+174·87	− 0·02	− 0·97	+52	48	46·35	+1320·9	+ 9·3	−10·6	7	8	43·15	42·72
1322	−10	5506	3·83	A 0	20	44	58·202	+324·47	− 0·42	+ 0·20	− 9	40	47·81	+1321·3	+17·5	− 3·1	4	19	38·69	40·61
1323	+ 5	4613	5·59	A 0	20	45	19·688	+297·09	− 0·13	+ 0·03	+ 5	49	24·17	+1323·7	+16·0	− 0·4	7	8	41·04	40·50
1324	+27	3868	6·95	A 5	20	45	44·577	+255·38	+ 0·12	+ 0·09	+27	24	37·59	+1326·4	+13·7	− 1·6	6		45·20	
1325	−26	15282	5·78	B 8	20	46	19·668	+356·00	− 0·88	+ 0·10	−25	58	1·44	+1330·2	+19·2	− 2·3	6		47·50	
1326	+81	718	5·69	A 0	20	46	19·674	−436·55	−28·40	+ 1·40	+82	20	51·89	+1330·3	−24·1	+ 2·7	145	131	40·89	40·97
1327	− 1	4057	6·53	M b	20	46	43·006	+308·63	− 0·24	− 0·24	− 0	44	57·16	+1332·7	+16·5	− 1·2	6		43·53	
1328	−13	5773	5·99	K 0	20	47	56·438	+329·77	− 0·49	+ 0·83	−12	43	52·61	+1340·7	+17·6	− 7·0	3	6	43·45	41·28
1329	−21	5844	7·07	F 5	20	48	0·951	+346·44	− 0·73	+ 0·07	−21	29	56·83	+1341·2	+18·5	− 8·6	4	5	47·44	46·53
1330	+43	3739	5·07	A 5	20	48	18·105	+211·99	+ 0·15	+ 1·13	+43	52	10·85	+1343·0	+11·2	+13·4	7		41·17	
1331	+63	1663	6·38	B 0	20	48	24·839	+105·36	− 0·83	− 0·17	+63	51	19·46	+1343·8	+ 5·4	− 0·6	8	10	47·42	47·61
1332	− 9	5598	4·80	A 3	20	49	57·442	+323·23	− 0·41	+ 0·26	− 9	10	19·95	+1353·7	+17·1	− 2·8	4	15	44·91	44·08
1333	+36	4314	7·24	A 0	20	52	44·675	+234·22	+ 0·19	+ 0·10	+36	52	56·78	+1371·7	+12·2	− 1·0	9	10	39·40	39·54
1334	+13	4572	5·39	K 0	20	53	14·556	+283·93	− 0·02	+ 0·07	+13	31	47·09	+1374·8	+14·8	− 1·2	11	12	39·64	39·73
1335	−16	5741	5·95	A 3	20	54	52·744	+335·43	− 0·60	+ 0·31	−16	13	30·64	+1385·2	+17·4	+ 0·1	8	9	38·51	38·32
1336	+40	4364	4·04	A 0	20	55	18·416	+223·61	+ 0·20	+ 0·05	+40	58	25·58	+1387·9	+11·5	− 0·9	18	19	43·28	42·88
1337	+ 3	4466	6·88	K 2	20	55	18·512	+300·58	− 0·16	− 0·02	+ 4	0	5·31	+1387·9	+15·5	− 0·1	11		39·83	
1338	+21	4424	5·57	K 5	20	56	2·114	+268·25	− 0·09	− 0·06	+22	7	53·27	+1392·5	+13·8	+ 0·6	14	15	41·08	41·13
1339	+45	3364	5·24	B 3	20	59	26·024	+209·39	+ 0·18	+ 0·03	+45	57	30·53	+1413·7	+10·5	+ 0·7	10		37·24	
1340	+56	2523	6·70	B 8	21	0	33·481	+162·89	− 0·10	− 0·11	+56	52	26·10	+1420·7	+ 8·0	+ 0·7	8		37·20	
1341	+67	1283	7·20	B 5	21	0	59·732	+ 74·90	− 1·52	+ 0·10	+67	57	55·63	+1423·4	+ 3·6	+ 0·8	13	15	42·48	41·60
1342	− 0	4161	7·10	K 2	21	3	59·451	+307·83	− 0·24	+ 0·06	− 0	18	23·31	+1441·7	+15·3	+ 1·5	10	11	39·06	39·22
1343	+26	4073	6·23	K 2	21	4	12·848	+260·65	+ 0·16	+ 0·25	+26	43	23·82	+1443·1	+12·9	− 1·7	7	8	38·61	38·37
1344	+30	4318	*	F 5	21	4	24·207	+251·69	+ 0·19	− 0·04	+30	58	59·41	+1444·2	+12·4	− 0·3	7		37·63	
1345	+15	4340	6·52	K 0	21	5	12·445	+281·80	+ 0·02	+ 0·28	+15	27	26·40	+1449·1	+13·9	− 5·8	8		38·01	
1346	−21	5933	5·27	A 0	21	5	41·969	+343·41	− 0·76	+ 0·12	−21	23	44·67	+1452·0	+17·0	− 5·7	7		38·88	
1347	+ 6	4754	6·38	K 5	21	5	59·942	+296·39	− 0·11	− 0·11	+ 6	47	11·14	+1453·8	+14·6	0·0	6	7	38·59	39·75
1348	−11	5538	4·52	K 0	21	6	52·258	+326·09	− 0·48	+ 0·61	−11	34	31·12	+1459·0	+16·0	− 1·2	14	28	43·02	41·36
1349	+86	319	7·36	A 3	21	9	16·043	−1329·57	−191·36	+ 2·00	+86	49	57·18	+1473·4	−66·0	+ 1·7	32	29	37·77	37·78
1350	+29	4348	3·40	K 0	21	10	48·341	+255·36	+ 0·20	− 0·04	+30	1	15·82	+1482·5	+12·2	− 5·3	11	10	39·42	38·69

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1316 K0 + A *1344 5m7 to 5m9

No.	BD or CD No.		M + Sp.	R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°			h	m	s	s	s	s	°	′	″	″	″	″				
1351	− 6	5720	7·18 K 2	21	12	25·760	+316·33	− 0·35	− 0·11	− 5	45	34·35	+1491·9	+15·0	− 2·6	10		40·27	
1352	+ 4	4635	4·14 *	21	13	19·418	+299·49	− 0·13	+ 0·36	+ 5	2	24·81	+1497·1	+14·2	− 8·3	23	59	44·78	42·90
1353	+24	4357	7·06 G 5	21	13	44·519	+265·56	+ 0·16	− 0·49	+25	13	30·65	+1499·6	+12·5	− 3·5	7	8	40·88	41·86
1354	−18	5903	5·39 B 8	21	15	9·168	+336·26	− 0·68	+ 0·10	−18	11	44·27	+1507·8	+15·8	0·0	8		40·00	
1355	+10	4516	6·32 K 5	21	16	26·668	+290·34	− 0·03	+ 0·21	+10	59	29·90	+1515·2	+13·8	+ 1·5	9	11	39·33	39·24
1356	+43	3877	5·06 Oe5	21	16	35·146	+223·70	+ 0·28	− 0·01	+43	44	5·16	+1516·0	+10·4	− 0·9	9		39·37	
1357	+37	4271	5·83 F 2	21	17	22·374	+239·25	+ 0·28	+ 0·06	+38	1	31·98	+1520·5	+11·0	− 0·6	8	9	39·26	39·10
1358	+61	2111	2·60 A 5	21	17	22·995	+141·00	− 0·37	+ 2·12	+62	22	23·18	+1520·6	+ 6·4	+ 5·2	12	15	42·98	43·98
1359	+52	2913	6·81 K 2	21	18	4·152	+192·85	+ 0·18	+ 0·06	+52	50	44·75	+1524·5	+ 8·8	0·0	12	13	41·58	42·05
1360	+ 3	4551	6·92 K 0	21	19	31·000	+301·11	− 0·14	+ 0·21	+ 4	7	53·97	+1532·6	+13·8	− 0·7	8		38·98	
1361	+19	4691	4·27 K 0	21	19	46·314	+276·72	+ 0·10	+ 0·72	+19	35	21·99	+1534·0	+12·6	+ 6·8	18	72	46·21	41·78
1362	−13	5923	5·54 A 5	21	21	27·613	+327·15	− 0·54	+ 0·60	−13	5	36·87	+1543·5	+14·8	+ 1·1	7		40·90	
1363	− 4	5446	5·69 K 0	21	22	40·554	+312·91	− 0·30	− 0·12	− 3	46	19·28	+1550·3	+14·1	− 7·1	7	10	38·91	38·30
1364	+18	4794	6·06 A 3	21	24	7·144	+278·13	+ 0·11	+ 0·54	+19	9	28·68	+1558·3	+12·4	+ 1·4	13		40·32	
1365	+ 7	4696	6·66 M a	21	25	56·889	+295·67	− 0·07	+ 0·04	+ 7	58	37·82	+1568·2	+13·1	− 3·2	13	16	42·35	41·69
1366	−19	6107	6·54 F 2	21	27	11·343	+336·38	− 0·72	+ 0·22	−19	22	0·66	+1575·0	+14·8	− 4·3	6	7	38·95	39·50
1367	+69	1173	3·33 B 1	21	28	1·298	+ 77·08	− 1·81	+ 0·21	+70	20	27·85	+1579·5	+ 3·2	+ 1·4	9	10	46·12	46·17
1368	+34	4436	7·17 A 0	21	28	1·309	+249·19	+ 0·31	− 0·12	+35	15	8·76	+1579·5	+10·8	− 1·6	9		41·31	
1369	− 6	5770	3·07 G 0	21	28	55·642	+315·63	− 0·35	+ 0·12	− 5	47	31·84	+1584·4	+13·8	− 0·4	4	12	49·18	45·01
1370	−25	15479	6·42 A 5	21	29	40·579	+345·01	− 0·91	+ 0·49	−24	48	43·52	+1588·3	+15·0	+ 1·9	5	8	43·72	45·09
1371	+22	4431	6·37 F 8	21	32	16·782	+274·02	+ 0·18	+ 0·07	+22	31	55·25	+1602·1	+11·6	− 4·0	10	11	39·00	38·80
1372	+49	3562	7·00 B 9	21	34	23·433	+211·90	+ 0·35	+ 0·24	+50	16	37·37	+1613·2	+ 8·8	+ 2·4	7		39·93	
1373	+11	4613	7·20 A 0	21	34	40·761	+291·23	0·00	+ 0·05	+11	29	38·83	+1614·7	+12·2	+ 0·3	8		40·03	
1374	− 8	5701	4·78 A 5	21	35	5·434	+318·54	− 0·40	+ 0·74	− 8	4	45·80	+1616·8	+13·4	− 2·2	18	50	47·97	43·08
1375	+61	2169	4·87 B2p	21	36	34·644	+161·02	− 0·08	− 0·05	+61	51	21·49	+1624·4	+ 6·6	− 0·1	10	14	40·88	41·97
1376	−17	6340	3·80 F0p	21	37	19·208	+330·98	− 0·64	+ 1·31	−16	53	20·97	+1628·2	+13·8	− 2·2	7	8	39·07	39·91
1377	+59	2409	6·95 K 0	21	39	3·748	+176·34	+ 0·12	+ 0·82	+59	31	28·04	+1637·1	+ 7·0	+ 2·7	7		38·50	
1378	+ 0	4770	5·80 K 5	21	39	37·131	+305·91	− 0·19	− 0·03	+ 1	03	23·65	+1639·8	+12·4	− 0·4	7	8	38·82	39·20
1379	+45	3637	6·47 M b	21	40	13·462	+229·35	+ 0·42	+ 0·03	+45	32	13·32	+1642·9	+ 9·2	− 1·3	7	8	40·65	41·65
1380	+ 6	4889	6·74 K 0	21	41	10·980	+297·58	− 0·06	− 0·20	+ 7	17	59·23	+1647·7	+12·0	− 5·7	6	7	39·97	40·09
1381	+ 9	4891	2·54 K 0	21	41	43·752	+294·44	− 0·02	+ 0·18	+ 9	38	41·25	+1650·5	+11·8	+ 0·5	19	57	46·42	42·03
1382	+35	4626	6·60 K 0	21	43	37·034	+253·65	+ 0·38	+ 0·75	+35	37	32·94	+1659·7	+10·0	+ 1·7	9		43·09	
1383	− 2	5631	7·16 M b	21	43	56·463	+310·52	− 0·26	+ 0·13	− 2	26	41·29	+1661·4	+12·3	+ 2·4	6	7	41·93	41·48
1384	−16	5943	2·98 A 5	21	44	16·831	+329·21	− 0·63	+ 1·81	−16	21	15·68	+1662·9	+13·1	−29·3	11	27	42·58	40·86
1385	+16	4598	6·24 F 0	21	44	41·873	+284·64	+ 0·12	+ 0·62	+16	57	43·31	+1665·0	+11·2	− 1·4	6	8	38·61	39·04
1386	−27	15639	7·15 A 0	21	47	1·065	+345·69	− 1·03	+ 0·21	−27	38	14·04	+1676·2	+13·4	− 1·3	5	4	38·17	37·26
1387	+40	4648	6·49 A 0	21	47	37·830	+244·10	+ 0·45	− 0·07	+40	54	53·91	+1679·1	+ 9·4	− 0·5	9		39·91	
1388	−23	17135	6·85 F 8	21	48	33·802	+338·85	− 0·87	+ 2·53	−23	30	14·75	+1683·6	+13·0	− 8·4	8	8	38·76	39·28
1389	−14	6149	5·18 F 0	21	50	34·201	+324·87	− 0·56	+ 2·11	−13	47	17·15	+1693·1	+12·2	+ 1·4	17	43	46·16	41·44
1390	+54	2638	7·01 K 0	21	50	42·978	+207·37	+ 0·44	+ 0·29	+54	26	48·91	+1693·8	+ 7·8	+ 2·1	6	8	39·08	39·50
1391	+31	4577	7·10 K 5	21	52	42·650	+263·13	+ 0·38	− 0·11	+32	6	4·71	+1703·0	+ 9·8	+ 0·4	8	9	41·05	41·02
1392	+78	768	6·80 K 5	21	52	48·127	− 65·84	− 9·73	+ 0·30	+79	18	54·20	+1703·4	− 2·8	+ 2·2	13	14	40·96	40·80
1393	+20	5046	6·62 K 5	21	54	3·581	+280·54	+ 0·22	− 0·04	+21	0	4·88	+1709·2	+10·3	+ 1·9	9	8	41·21	40·28
1394	+11	4696	5·59 A 2	21	54	30·001	+292·74	+ 0·05	− 0·23	+11	50	17·54	+1711·2	+10·7	− 1·0	7	9	37·67	37·59
1395	+65	1691	6·28 B 3	21	55	54·322	+153·25	− 0·16	+ 0·06	+65	55	1·80	+1717·6	+ 5·4	+ 0·4	12	14	45·23	45·06
1396	+ 3	4644	7·07 F 8	21	55	57·834	+303·07	− 0·11	− 1·73	+ 3	32	23·08	+1717·8	+11·0	−13·7	8		39·18	
1397	− 5	5674	6·42 K 0	21	56	18·532	+312·87	− 0·30	− 0·04	− 4	36	31·41	+1719·4	+11·4	−25·4	11		41·78	
1398	−18	6056	6·38 G 5	21	59	26·747	+329·31	− 0·68	+ 0·80	−18	8	38·96	+1733·3	+11·6	− 5·5	9		37·37	
1399	+ 9	4975	6·98 K 0	22	2	3·290	+295·73	+ 0·03	− 0·40	+ 9	59	50·54	+1744·6	+10·2	− 1·0	8		39·05	
1400	− 1	4242	5·23 A 3	22	2	13·137	+308·64	− 0·21	− 0·14	− 1	8	56·61	+1745·4	+10·6	− 4·8	5	7	38·37	39·22

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch

*1352 F8 + A3

No.	BD or CD No.		M + Sp.		R.A. 1950			Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950			Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
	°				h	m	s	s	s	s	°	′	″	″	″	″				
1401	− 1	4246	3·19	G 0	22	3	12·926	+307·97	− 0·20	+ 0·10	− 0	33	48·93	+1749·6	+10·6	− 0·4	18	51	47·19	42·27
1402	+28	4284	5·58	A 0	22	3	18·508	+271·64	+ 0·38	+ 0·16	+28	43	13·15	+1750·1	+ 9·3	− 1·0	6		38·43	
1403	−22	5833	6·89	G 5	22	4	28·122	+334·04	− 0·82	+ 0·10	−22	29	7·75	+1755·0	+11·4	+ 2·1	7		42·33	
1404	+17	4693	6·43	M a	22	5	6·311	+286·76	+ 0·19	+ 0·14	+17	45	22·62	+1757·7	+ 9·7	− 3·9	7		39·24	
1405	+45	3813	6·52	G 5	22	6	39·435	+242·80	+ 0·60	− 0·28	+45	29	45·10	+1764·1	+ 8·0	+ 3·1	9	10	43·10	43·77
1406	+ 5	4961	3·70	A 2	22	7	40·550	+300·77	− 0·04	+ 1·81	+ 5	57	3·39	+1768·4	+10·0	+ 3·7	9	63	47·18	41·23
1407	−12	6196	5·40	B 5	22	7	57·155	+320·45	− 0·48	+ 0·19	−11	48	42·15	+1769·4	+10·6	+ 1·2	6		42·91	
1408	+57	2475	3·62	K 0	22	9	6·934	+208·03	+ 0·60	+ 0·14	+57	57	15·77	+1774·2	+ 6·7	+ 0·8	7		40·95	
1409	−26	16033	6·16	A 2	22	10	8·667	+338·15	− 0·98	− 0·17	−26	34	30·22	+1778·4	+11·0	− 3·2	7	7	43·60	43·46
1410	−16	6046	6·60	G 5	22	11	55·891	+324·80	− 0·60	− 0·08	−16	3	41·19	+1785·6	+10·4	−35·2	8	7	39·21	39·42
1411	+ 3	4687	7·06	K 0	22	12	15·323	+303·05	− 0·08	− 0·02	+ 4	1	59·82	+1786·9	+ 9·6	+ 2·1	7		38·08	
1412	+21	4719	6·69	K 0	22	12	27·104	+282·58	+ 0·30	− 0·03	+22	16	28·41	+1787·6	+ 9·0	− 0·4	7	8	39·53	39·07
1413	+42	4333	5·70	A 0	22	12	38·028	+251·65	+ 0·63	+ 0·46	+42	42	18·33	+1788·3	+ 8·0	− 2·0	7	7	38·81	39·54
1414	− 8	5845	4·32	K 0	22	14	11·750	+315·73	− 0·36	+ 0·78	− 8	1	58·72	+1794·4	+ 9·9	− 1·9	3	19	44·84	39·55
1415	− 6	5960	5·80	G 5	22	14	29·923	+313·19	− 0·30	0·00	− 5	38	15·38	+1795·6	+ 9·8	+ 2·5	7	10	38·64	41·08
1416	+12	4797	6·94	G 0	22	14	44·771	+294·03	+ 0·11	+ 5·77	+12	38	48·21	+1796·6	+ 9·1	+ 9·9	6		43·94	
1417	+62	2059	5·99	K 5	22	16	34·516	+195·13	+ 0·56	+ 0·64	+62	33	11·93	+1803·6	+ 5·8	+ 1·8	10	13	41·29	42·60
1418	+37	4537	6·11	F 0	22	16	44·335	+262·65	+ 0·58	+ 0·46	+37	31	2·35	+1804·3	+ 8·0	+ 4·5	7		40·94	
1419	+85	383	5·38	A 0	22	17	33·125	−490·08	−77·87	+ 5·07	+85	51	26·52	+1807·3	−15·8	+ 4·9	80	71	42·64	43·55
1420	+56	2755	6·54	B 8	22	18	15·770	+220·08	+ 0·74	+ 0·04	+56	39	58·08	+1810·0	+ 6·5	+ 1·0	5	6	43·09	43·10
1421	+30	4685	7·65	K 0	22	18	45·147	+272·93	+ 0·48	− 0·11	+31	3	28·58	+1811·8	+ 8·1	− 2·6	6	7	40·46	41·36
1422	− 2	5741	3·97	A 0	22	19	4·381	+308·96	− 0·20	+ 0·85	− 1	38	23·54	+1813·1	+ 9·2	+ 1·3	4	6	44·30	42·54
1423	+51	3358	4·58	K 0	22	21	35·337	+236·18	+ 0·80	− 0·19	+51	58	41·83	+1822·3	+ 6·8	−18·5	6		44·73	
1424	+50	3706	6·87	M a	22	23	3·008	+239·59	+ 0·81	+ 0·54	+51	0	5·03	+1827·6	+ 6·8	+ 3·0	6		46·11	
1425	+17	4746	6·40	K 0	22	23	15·764	+289·34	+ 0·25	+ 0·13	+18	11	21·17	+1828·3	+ 8·2	+ 3·9	4	6	43·98	44·92
1426	+ 8	4874	5·82	K 2	22	26	38·148	+299·07	+ 0·06	+ 0·36	+ 8	52	23·50	+1840·2	+ 8·2	− 1·5	8		38·15	
1427	+26	4439	5·96	K 2	22	26	49·412	+280·98	+ 0·43	+ 0·15	+26	30	25·06	+1840·9	+ 7·7	− 0·5	7	7	38·82	38·12
1428	−11	5850	4·89	A 0	22	28	0·118	+317·41	− 0·42	0·00	−10	56	3·90	+1845·0	+ 8·6	− 2·7	7	20	45·29	41·91
1429	− 3	5460	6·29	K 0	22	28	43·328	+310·20	− 0·22	− 0·15	− 3	10	5·07	+1847·4	+ 8·4	− 3·1	6		40·62	
1430	−11	5855	6·39	F 0	22	29	2·276	+317·52	− 0·43	+ 0·47	−11	9	44·94	+1848·5	+ 8·6	− 4·2	5	6	40·43	40·18
1431	+39	4871	5·80	A 3	22	30	13·469	+265·24	+ 0·70	+ 0·03	+39	31	19·27	+1852·4	+ 7·0	− 0·3	5	6	38·01	37·66
1432	− 0	4384	4·13	B 8	22	32	47·178	+307·65	− 0·14	+ 0·60	− 0	22	32·67	+1860·9	+ 8·0	− 5·0	16	57	47·97	42·83
1433	−18	6154	6·81	K 5	22	33	7·420	+323·13	− 0·62	− 0·23	−17	43	8·34	+1862·0	+ 8·3	− 3·9	4	6	40·06	39·30
1434	+49	3903	6·20	B 3	22	33	48·391	+249·23	+ 0·90	+ 0·03	+49	48	41·40	+1864·2	+ 6·3	+ 0·8	7		40·23	
1435	+23	4576	6·93	A 3	22	35	10·232	+286·07	+ 0·40	− 0·24	+23	44	29·38	+1868·5	+ 7·2	− 0·9	6	7	37·81	37·53
1436	− 8	5912	6·35	G 0	22	35	44·708	+314·21	− 0·34	+ 0·47	− 8	9	28·34	+1870·3	+ 7·8	0·0	9		38·27	
1437	+13	4971	5·81	G 5	22	38	23·685	+295·46	+ 0·22	+ 1·81	+14	17	7·81	+1878·6	+ 7·1	+14·5	6		41·12	
1438	+10	4797	3·61	B 8	22	38	57·982	+298·69	+ 0·13	+ 0·53	+10	34	11·21	+1880·2	+ 7·2	− 0·7	15	69	47·72	41·93
1439	+30	4771	6·48	K 5	22	39	10·878	+279·92	+ 0·58	+ 0·46	+30	42	15·01	+1881·0	+ 6·7	0·0	6	6	41·59	42·76
1440	+ 4	4896	7·30	K 2	22	40	21·008	+303·58	0·00	+ 0·16	+ 4	42	22·42	+1884·4	+ 7·2	+ 0·9	6		42·50	
1441	+29	4741	3·10	G 0	22	40	39·252	+281·20	+ 0·56	+ 0·09	+29	57	33·89	+1885·4	+ 6·6	− 2·2	6	7	41·00	41·26
1442	+18	5046	6·45	K 0	22	43	2·062	+292·08	+ 0·33	− 0·24	+19	6	7·89	+1892·3	+ 6·6	+ 6·3	11	12	41·00	41·16
1443	+ 6	5060	6·84	F 2	22	43	57·408	+301·74	+ 0·07	+ 0·33	+ 7	19	9·15	+1894·9	+ 6·8	+ 0·5	8		38·83	
1444	+22	4709	4·14	K 0	22	44	7·137	+288·61	+ 0·44	+ 0·39	+23	18	7·18	+1895·4	+ 6·4	− 0·6	9	10	40·26	39·82
1445	−20	6486	5·43	G 5	22	44	52·195	+322·88	− 0·68	− 0·73	−19	52	26·18	+1897·6	+ 7·2	−19·8	7		38·98	
1446	− 2	5826	7·58	K 2	22	44	55·285	+308·87	− 0·16	+ 0·03	− 2	3	10·18	+1897·6	+ 6·8	+ 0·3	9		41·27	
1447	−14	6346	5·70	B 9	22	45	3·535	+318·28	− 0·50	+ 0·19	−14	19	13·73	+1898·0	+ 7·0	− 0·6	6	8	40·36	39·63
1448	−26	16324	6·48	G 5	22	45	11·706	+328·39	− 0·90	+ 0·82	−26	10	28·70	+1898·4	+ 7·3	−10·8	8		43·30	
1449	+82	703	4·97	K 0	22	47	43·988	− 24·80	−13·24	+ 1·25	+82	53	18·40	+1905·5	− 1·0	+ 5·3	12		42·67	
1450	+65	1814	3·68	K 0	22	47	53·656	+214·74	+ 1·19	− 1·13	+65	56	14·57	+1905·9	+ 4·4	−11·8	15	17	44·52	44·89

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs	Epoch 1900+
	°		h m s	s	s	s	° ′ ″	″	″	″		
1451	+25 4828	6·71 A 3	22 49 2·790	+287·36	+ 0·52	− 0·09	+26 7 31·16	+1908·9	+ 6·0	+ 0·8	8	38·56
1452	− 8 5968	3·84 M a	22 50 0·382	+312·86	− 0·30	+ 0·05	− 7 50 46·63	+1911·5	+ 6·4	+ 4·0	10 41	46·68 41·46
1453	+67 1475	6·94 F 2	22 50 55·838	+210·52	+ 1·22	+ 1·39	+67 43 23·31	+1914·0	+ 4·1	+ 7·2	12 13	43·77 44·03
1454	−16 6173	3·51 A 2	22 51 59·885	+318·59	− 0·53	− 0·29	−16 5 13·36	+1916·7	+ 6·4	− 2·0	8 9	43·44 43·81
1455	−17 6619	5·66 K 0	22 52 6·957	+318·91	− 0·55	− 1·57	−16 32 13·70	+1917·0	+ 6·4	− 8·6	4 6	40·86 40·03
1456	+36 4956	6·00 F 2	22 52 42·709	+278·39	+ 0·79	+ 0·70	+36 48 35·02	+1918·5	+ 5·5	+ 1·5	9 8	39·82 39·83
1457	+55 2850	7·06 B 9	22 54 4·915	+250·74	+ 1·28	+ 0·09	+56 10 59·12	+1921·9	+ 4·8	+ 0·5	6	39·64
1458	+11 4904	6·46 A 3	22 54 21·321	+299·59	+ 0·20	+ 0·39	+11 34 51·38	+1922·6	+ 5·8	− 0·6	8	39·78
1459	+83 640	4·96 K 5	22 54 52·972	− 53·78	−18·66	+ 5·84	+84 4 43·51	+1923·9	− 1·6	+ 3·3	67 69	45·11 44·89
1460	−30 19370	1·29 A 3	22 54 53·203	+328·85	− 1·02	+ 2·58	−29 53 13·63	+1923·9	+ 6·3	−15·9	2	39·30
1461	+ 3 4799	6·43 K 2	22 54 59·930	+305·02	0·00	+ 0·42	+ 3 32 31·50	+1924·2	+ 5·8	+ 4·3	8 7	40·30 40·37
1462	+19 5036	5·59 G 0	22 55 0·173	+293·35	+ 0·41	+ 1·42	+20 30 0·22	+1924·2	+ 5·6	+ 5·9	7	38·70
1463	+51 3514	6·41 K 2	22 57 0·012	+260·25	+ 1·23	− 0·37	+52 23 8·72	+1929·0	+ 4·7	+ 2·8	6 7	38·16 38·27
1464	− 0 4443	6·40 K 0	22 58 4·000	+307·38	− 0·08	+ 0·24	− 0 4 59·12	+1931·5	+ 5·6	+ 1·9	8 7	40·19 40·38
1465	− 7 5910	6·40 K 2	22 58 47·784	+311·86	− 0·26	− 0·14	− 7 19 47·58	+1933·2	+ 5·6	− 0·6	7	41·96
1466	+41 4664	3·63 *	22 59 36·829	+275·93	+ 0·98	+ 0·18	+42 3 24·62	+1935·1	+ 4·8	+ 0·2	8 9	40·61 40·43
1467	−21 6354	6·19 G 5	23 0 4·229	+320·69	− 0·68	− 0·43	−21 8 16·89	+1936·1	+ 5·6	−11·5	7 6	43·34 43·93
1468	+62 2160	7·00 K 0	23 0 38·531	+239·96	+ 1·54	+ 0·39	+63 4 16·98	+1937·4	+ 4·1	+ 0·9	7 9	44·42 45·23
1469	+27 4480	2·61 M a	23 1 20·667	+289·48	+ 0·62	+ 1·42	+27 48 39·89	+1938·9	+ 5·0	+14·3	6 7	43·86 44·28
1470	+14 4926	2·57 A 0	23 2 16·051	+298·44	+ 0·30	+ 0·42	+14 56 9·07	+1941·0	+ 5·0	− 3·6	6 48	46·28 40·86
1471	+34 4847	6·54 K 0	23 4 42·092	+284·67	+ 0·83	+ 0·42	+35 21 56·04	+1946·2	+ 4·6	0·0	6	39·67
1472	+19 5060	6·74 K 0	23 4 57·611	+295·56	+ 0·44	− 0·09	+20 18 40·70	+1946·7	+ 4·7	− 3·3	7	43·89
1473	+29 4862	7·25 B 9	23 5 15·372	+289·23	+ 0·68	− 0·21	+29 47 1·17	+1947·3	+ 4·6	− 0·4	8 7	44·04 44·77
1474	+45 4149	5·56 K 5	23 5 21·656	+274·52	+ 1·14	− 0·16	+46 7 0·81	+1947·6	+ 4·3	− 3·0	5 7	38·45 38·73
1475	+ 7 4981	5·41 M b	23 6 59·924	+302·80	+ 0·16	− 0·01	+ 8 24 20·66	+1950·8	+ 4·6	+ 0·6	8 9	38·59 38·64
1476	+42 4592	5·85 F 5	23 8 8·399	+279·10	+ 1·08	− 1·80	+43 16 33·08	+1953·1	+ 4·2	−18·8	7 9	38·27 38·85
1477	− 6 6170	4·40 M a	23 11 43·970	+310·42	− 0·20	+ 0·24	− 6 19 6·51	+1960·0	+ 4·3	−19·0	12 37	44·36 41·22
1478	−11 6032	6·35 K 5	23 12 3·840	+312·70	− 0·33	− 0·05	−10 57 39·54	+1960·6	+ 4·3	− 3·0	5 6	43·81 42·67
1479	+24 4737	6·74 K 0	23 12 55·590	+294·39	+ 0·60	0·00	+25 23 57·12	+1962·1	+ 4·0	+ 1·7	8	44·95
1480	− 4 5852	5·55 A 2	23 12 59·695	+309·12	− 0·14	− 0·12	− 3 46 8·87	+1962·3	+ 4·2	+ 0·2	5 7	49·32 45·63
1481	+ 2 4648	3·85 K 0	23 14 34·157	+305·95	+ 0·04	+ 5·06	+ 3 0 31·02	+1965·0	+ 3·9	+ 2·4	16 55	46·73 42·32
1482	−18 6283	6·08 K 0	23 16 46·317	+315·64	− 0·54	− 0·09	−18 20 58·12	+1968·7	+ 3·9	+ 2·2	6 7	39·34 38·84
1483	+ 4 4997	5·18 K 0	23 17 47·614	+305·14	+ 0·10	+ 0·51	+ 5 6 29·89	+1970·4	+ 3·6	− 5·8	9 10	38·43 38·36
1484	+37 4817	5·75 F 5	23 18 27·993	+288·58	+ 0·98	+ 1·03	+37 54 33·19	+1971·4	+ 3·4	− 6·6	12	41·41
1485	+59 2710	5·93 K 5	23 20 18·082	+267·67	+ 1·87	+ 0·05	+59 51 32·85	+1974·3	+ 3·0	− 0·2	16 19	41·75 41·32
1486	+11 4993	5·28 K 0	23 20 33·108	+302·44	+ 0·29	+ 0·15	+12 2 22·36	+1974·6	+ 3·4	− 1·4	9 10	38·30 38·16
1487	−21 6420	4·52 K 5	23 23 25·355	+315·44	− 0·60	− 0·39	−20 54 58·03	+1978·8	+ 3·2	− 5·6	6	40·50
1488	+ 0 4998	4·94 A2p	23 24 22·069	+306·97	+ 0·02	+ 0·56	+ 0 58 54·22	+1980·1	+ 3·0	− 9·0	17 54	47·12 43·17
1489	−12 6496	6·48 G 0	23 25 29·067	+311·49	− 0·32	+ 0·66	−11 43 29·54	+1981·6	+ 3·0	− 1·9	6	42·96
1490	−26 16654	6·89 A 3	23 25 46·993	+316·89	− 0·76	− 0·13	−25 41 44·82	+1981·9	+ 3·0	− 0·5	6	47·75
1491	+15 4830	6·98 A 2	23 26 31·084	+301·85	+ 0·40	+ 0·01	+15 44 13·29	+1982·9	+ 2·8	+ 0·9	6	44·12
1492	− 1 4443	7·10 G 0	23 26 56·442	+307·77	− 0·03	− 0·15	− 1 18 40·50	+1983·4	+ 2·8	− 2·8	7	47·19
1493	+86 344	5·62 F 0	23 27 32·901	− 56·08	−38·84	+10·19	+87 01 54·17	+1984·2	− 1·0	+ 2·0	73 61	38·01 38·07
1494	+27 4566	6·68 K 0	23 29 0·960	+297·60	+ 0·76	+ 0·10	+28 23 24·91	+1986·0	+ 2·5	− 1·5	6 7	45·32 45·54
1495	+ 6 5168	6·84 F 5	23 29 40·043	+305·22	+ 0·18	− 0·19	+ 6 48 33·78	+1986·7	+ 2·5	− 4·7	5 6	47·00 47·12
1496	+77 909	7·08 A 0	23 29 44·218	+227·69	+ 3·25	+ 1·28	+77 32 36·26	+1986·8	+ 1·8	+ 1·5	11 10	45·98 46·24
1497	+52 3469	7·02 K 0	23 30 12·449	+284·00	+ 1·70	+ 0·04	+53 24 37·36	+1987·4	+ 2·2	+ 0·4	7	47·66
1498	+21 4952	5·51 M b	23 30 57·612	+300·43	+ 0·59	+ 0·05	+22 13 21·53	+1988·1	+ 2·4	− 1·8	6	44·31
1499	+11 5026	7·70 A 3	23 32 38·862	+303·83	+ 0·34	− 0·09	+12 23 10·28	+1990·0	+ 2·2	− 5·4	6 7	45·12 43·79
1500	+66 1619	7·40 K 0	23 32 53·441	+269·80	+ 2·70	+ 0·56	+67 12 54·80	+1990·3	− 1·9	+ 0·9	10	42·54

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

*1466 B5 + A2p

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+	
	°		h m s	s	s	s	° ′ ″	″	″	″			
1501	+ 1 4744	5·65 F 5	23 33 50·190	+306·84	+ 0·06	− 0·73	+ 1 49 27·49	+1991·2	+ 2·1	+ 6·2	7	40·74	
1502	+43 4508	5·86 B 9	23 35 4·922	+293·25	+ 1·34	+ 0·09	+44 9 8·51	+1992·5	+ 1·9	− 0·9	6	38·20	
1503	−15 6464	6·66 K 0	23 35 27·083	+311·26	− 0·40	+ 0·58	−15 22 13·30	+1992·8	+ 2·0	−10·5	6	45·60	
1504	+49 4180	5·32 B 9	23 36 42·413	+291·06	+ 1·62	− 0·21	+50 11 41·08	+1993·9	+ 1·7	− 0·4	6	41·36	
1505	+73 1047	6·08 G 5	23 37 9·408	+261·79	+ 3·62	− 0·17	+73 43 32·12	+1994·3	+ 1·5	+ 1·1	13 12	44·86	45·44
1506	+76 928	3·42 K 0	23 37 16·693	+248·39	+ 4·12	− 2·14	+77 21 10·76	+1994·4	+ 1·4	+15·7	13 13	45·59	44·71
1507	+ 4 5035	4·28 F 8	23 37 22·539	+306·09	+ 0·16	+ 2·50	+ 5 21 21·45	+1994·5	+ 1·8	−43·2	20 51	47·41	42·81
1508	+35 5074	6·30 F 5	23 38 10·197	+297·94	+ 1·06	+ 1·91	+36 26 35·47	+1995·2	+ 1·6	+ 2·6	7	43·95	
1509	− 8 6166	7·08 F 8	23 38 13·833	+309·15	− 0·18	+ 0·43	− 8 11 27·46	+1995·2	+ 1·7	− 4·0	6	44·60	
1510	− 3 5707	5·60 K 0	23 45 22·203	+307·78	− 0·03	+ 0·60	− 3 2 22·76	+2000·2	+ 1·0	+ 1·2	11 14	40·22	39·36
1511	−28 18353	4·64 A 0	23 46 19·405	+311·63	− 0·78	+ 0·81	−28 24 23·88	+2000·7	+ 1·0	−10·0	3 5	43·52	43·46
1512	−28 18361	7·03 F 8	23 46 44·252	+311·46	− 0·76	− 0·58	−28 7 53·26	+2000·9	+ 0·9	− 3·3	3	39·24	
1513	−22 6199	7·14 K 0	23 46 50·823	+310·41	− 0·56	− 0·03	−21 53 31·62	+2001·0	+ 0·9	+ 1·2	8	44·90	
1514	+63 2064	6·76 A 0	23 48 31·709	+293·80	+ 2·82	+ 0·04	+63 42 24·10	+2001·7	+ 0·6	+ 0·8	8 11	42·83	42·73
1515	+ 8 5127	6·11 M a	23 48 47·972	+306·29	+ 0·30	− 0·15	+ 9 2 10·88	+2001·9	+ 0·6	− 5·9	7	41·42	
1516	+ 2 4725	5·85 K 2	23 49 24·128	+307·04	+ 0·13	+ 0·06	+ 2 39 8·49	+2002·1	+ 0·6	− 1·1	6	42·83	
1517	+18 5231	5·23 M a	23 49 56·425	+305·33	+ 0·57	− 0·05	+18 50 33·52	+2002·4	+ 0·6	− 3·0	16 43	45·92	43·14
1518	+82 743	6·42 A 0	23 54 3·827	+279·51	+ 9·92	+ 2·58	+82 54 45·94	+2003·6	+ 0·1	+ 1·8	66 65	46·30	46·25
1519	+21 4999	6·30 M a	23 54 8·417	+305·93	+ 0·68	− 0·16	+22 22 11·54	+2003·7	+ 0·2	+ 0·4	8	39·86	
1520	−16 6394	6·40 K 2	23 55 46·876	+308·04	− 0·36	+ 0·54	−16 7 32·86	+2003·9	0·0	− 0·4	7 6	44·77	44·45
1521	+34 5039	6·71 A 3	23 55 47·895	+305·62	+ 1·10	+ 0·16	+34 44 4·40	+2004·0	0·0	+ 1·1	6	39·21	
1522	+54 3082	4·93 B 2	23 56 27·672	+304·33	+ 2·22	+ 0·09	+55 28 36·26	+2004·0	− 0·1	− 0·2	7 6	45·08	45·44
1523	+ 6 5227	4·03 F 5	23 56 44·422	+307·11	+ 0·26	+ 1·01	+ 6 35 12·15	+2004·1	− 0·1	−10·8	7 28	43·41	40·74
1524	− 6 6335	6·77 G 5	23 57 6·690	+307·51	− 0·08	+ 0·24	− 6 10 14·58	+2004·1	− 0·2	− 4·9	7	46·90	
1525	+ 7 5121	5·78 F 0	23 59 56·278	+307·32	+ 0·31	− 0·68	+ 8 12 27·90	+2004·3	− 0·4	− 4·6	8 9	39·14	38·88

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950·0, T′ in centuries from epoch.

CORRECTIONS TO G.C. AND FK3

EXPLANATION

The following pages give the observed corrections to the G.C. and FK3 for the epoch of observation. The number of each star as it appears in the catalogue has been added for convenience of identification.

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
1	−18	6417	23	905	+0·025	−0·15	+0·019	−0·31
2	+13	5201	26	.....	−0·015	−0·47	.....	.....
3	+26	4744	48	.....	+0·060	+0·02	.....	.....
4	+44	4550	54	.....	−0·017	+0·05	.....	.....
5	+39	5219	87	.....	−0·043	0·00	.....	.....
6	−23	4	98	1003	+0·002	+0·23	−0·003	+0·48
7	− 3	2	114	.....	+0·031	+0·24	.....	.....
8	+28	4	127	1	+0·010	+0·04	+0·010	−0·02
9	+58	3	147	2	−0·029	−0·09	+0·005	−0·15
10	+16	3	154	.....	−0·002	+0·02	.....	.....
11	+56	11	176	.....	−0·047	+0·44	.....	.....
12	−13	13	181	.....	+0·020	−1·28	.....	.....
13	+65	13	201	.....	−0·090	+0·34	.....	.....
14	+14	14	238	7	−0·006	−0·09	−0·010	−0·25
15	+ 3	26	304	.....	0·000	+0·44	.....	.....
16	+22	34	331	.....	+0·008	−0·19	.....	.....
17	+11	34	352	.....	+0·034	−0·06	.....	.....
18	+30	35	373	1006	−0·018	+0·11	−0·017	−0·13
19	+42	48	376	.....	+0·042	+0·07	.....	.....
20	− 8	38	378	.....	+0·034	−0·37	.....	.....
21	− 9	48	388	9	+0·004	+0·09	−0·005	−0·03
22	−18	41	403	1007	+0·021	+0·27	−0·021	+0·03
23	+52	61	488	.....	+0·006	0·00	.....	.....
24	−12	72	545	1011	−0·056	+0·65	−0·045	+0·51
25	+15	63	548	1012	+0·008	+0·21	−0·006	+0·10
26	+ 9	47	550	.....	+0·032	+0·14	.....	.....
27	−21	57	554	.....	−0·009	−0·30	.....	.....
28	+63	53	582	.....	+0·007	+0·15	.....	.....
29	+28	75	583	.....	+0·020	−0·46	.....	.....
30	− 4	54	584	13	+0·010	−0·34	−0·009	−0·50
31	+38	68	644	.....	−0·048	+0·14	.....	.....
32	−26	160	646	.....	+0·017	+0·47	.....	.....
33	− 4	62	696	.....	+0·018	−0·28	.....	.....
34	+14	76	728	.....	−0·004	+0·20	.....	.....
35	+ 2	80	744	.....	+0·007	−0·01	.....	.....
36	+81	13	760	.....	−0·191	−0·13	.....	.....
37	+48	192	770	.....	+0·007	−0·07	.....	.....
38	+20	85	778	.....	+0·008	−0·07	.....	.....
39	+55	139	792	21	−0·011	+0·22	+0·004	+0·14
40	−17	109	798	.....	+0·001	+0·34	.....	.....
41	− 5	101	804	.....	+0·048	−0·34	.....	.....
42	−18	115	865	22	−0·003	−0·22	−0·018	−0·23
43	+32	122	867	.....	−0·016	−0·07	.....	.....
44	+58	101	926	.....	−0·010	+0·26	.....	.....
45	+ 5	104	941	.....	+0·045	+0·28	.....	.....
46	+25	118	945	.....	−0·008	−0·19	.....	.....
47	−22	134	957	1018	−0·022	+0·74	−0·030	+0·90
48	+ 6	107	963	28	−0·006	−0·57	−0·005	−0·67
49	+16	76	968	1020	+0·028	−0·18	+0·012	−0·30
50	−14	145	984	.....	+0·015	−0·85	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
51	− 1	104	997	.....	−0·035	−0·69	.....	.....
52	+44	176	999	.....	−0·037	+0·37	.....	.....
53	− 1	114	1055	1022	−0·003	−0·10	−0·011	−0·09
54	+36	148	1060	.....	+0·016	+0·43	.....	.....
55	+13	127	1112	.....	−0·037	+0·17	.....	.....
56	+59	144	1117	32	−0·103	+0·35	−0·058	+0·33
57	+37	175	1122	33	−0·013	−0·13	−0·004	−0·18
58	+ 0	149	1146	.....	+0·011	−0·13	.....	.....
59	+20	131	1160	.....	−0·033	−0·07	.....	.....
60	− 6	176	1174	1024	+0·019	−0·89	+0·006	−1·01
61	68	64	1212	.....	−0·063	+0·31	.....	.....
62	−17	180	1236	1025	+0·037	−0·72	+0·001	−0·90
63	+ 7	153	1258	36	−0·011	−0·10	−0·013	−0·08
64	+51	220	1275	.....	−0·039	−0·43	.....	.....
65	+85	19	1288	Na	−0·109	−0·11	−0·112	−0·02
66	+28	174	1290	.....	−0·003	+0·01	.....	.....
67	−24	484	.....	1029	.....	.....	−0·019	+0·76
68	+31	185	1368	.....	+0·018	+0·46	.....	.....
69	−10	238	1369	.....	−0·025	−0·68	.....	.....
70	+19	185	1370	.....	−0·009	−0·51	.....	.....
71	+ 9	132	1381	.....	+0·029	−0·67	.....	.....
72	−10	240	1384	40	+0·010	−0·25	−0·007	−0·38
73	+34	198	1400	42	−0·024	+0·50	−0·025	+0·48
74	+45	291	1428	.....	−0·063	+0·20	.....	.....
75	+64	127	1434	.....	−0·033	−0·39	.....	.....
76	− 7	196	1463	.....	+0·044	−0·12	.....	.....
77	− 1	162	1501	.....	+0·032	−0·20	.....	.....
78	+38	229	1541	.....	−0·020	−0·52	.....	.....
79	+43	262	1550	.....	−0·005	−0·10	.....	.....
80	+ 2	185	1566	1034	+0·006	−0·26	0·000	−0·26
81	+57	260	1594	.....	−0·018	+0·44	.....	.....
82	−16	223	1605	.....	+0·005	−0·31	.....	.....
83	+21	178	1633	.....	−0·014	−0·68	.....	.....
84	+10	168	1634	.....	+0·032	−0·79	.....	.....
85	− 8	244	1695	47	+0·008	−0·11	−0·001	−0·12
86	− 3	195	1704	.....	0·000	+0·47	.....	.....
87	+59	248	1715	48	−0·014	+0·29	+0·005	+0·29
88	+26	239	1739	.....	−0·032	−0·15	.....	.....
89	+18	189	1740	1039	+0·024	+0·09	+0·017	−0·03
90	−13	262	1747	1041	−0·014	−0·21	−0·029	−0·19
91	−26	491	1810	.....	+0·018	+0·36	.....	.....
92	+14	231	1839	50	+0·022	+0·01	+0·026	−0·12
93	+34	265	1850	.....	+0·012	+0·30	.....	.....
94	+54	315	1873	.....	+0·017	−0·19	.....	.....
95	− 7	256	1888	.....	+0·007	−0·36	.....	.....
96	+13	240	1929	.....	+0·001	+0·05	.....	.....
97	+47	460	1938	.....	−0·030	−0·40	.....	.....
98	−16	270	1941	.....	−0·005	−0·89	.....	.....
99	+ 2	264	1980	.....	−0·077	+0·09	.....	.....
100	+77	58	1987	.....	−0·086	+0·32	.....	.....

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	°				s	″	s	″
101	+39	378	2025	.....	−0·023	+0·60	.....	.....
102	+ 4	293	2055	56	+0·017	−0·54	+0·021	−0·54
103	− 4	260	2093	1049	−0·031	−0·74	−0·030	−0·65
104	+44	354	2095	.....	−0·003	+0·71	.....	.....
105	−16	295	2123	59	−0·026	+0·34	−0·031	+0·38
106	+ 8	273	2139	60	−0·042	−0·54	−0·039	−0·66
107	+63	238	2161	.....	−0·027	+0·17	.....	.....
108	−14	335	2172	.....	+0·013	+0·41	.....	.....
109	−21	300	2184	.....	−0·004	−0·20	.....	.....
110	+16	203	2188	1050	+0·030	+0·26	+0·033	+0·22
111	+25	305	2207	.....	−0·022	−0·51	.....	.....
112	+74	84	2215	.....	−0·016	−0·29	.....	.....
113	+88	8	2243	Nb	−0·864	+0·02	−1·005	+0·13
114	−11	359	2249	62	+0·008	−0·46	+0·008	−0·57
115	+80	58	2270	.....	−0·183	+0·29	.....	.....
116	+62	320	2289	63	−0·019	−0·16	+0·050	−0·19
117	+ 2	290	2293	65	−0·008	−0·45	−0·006	−0·50
118	+ 8	292	2308	.....	−0·002	+0·49	.....	.....
119	+20	306	2309	66	−0·026	−0·04	−0·016	−0·15
120	+67	169	2313	.....	−0·070	−0·42	.....	.....
121	+30	310	2368	.....	−0·026	−0·50	.....	.....
122	+11	261	2395	.....	−0·004	−0·76	.....	.....
123	+59	376	2407	.....	−0·093	+0·56	.....	.....
124	+ 2	311	2416	.....	−0·002	−0·53	.....	.....
125	−21	358	2419	71	−0·004	+0 10	−0 014	−0·03
126	− 9	380	2426	.....	−0·027	−0·43	.....	.....
127	+53	439	2442	1054	−0·063	+0·29	−0·039	+0·22
128	−24	872	2470	.....	+0·001	+0·66	.....	.....
129	− 0	307	2474	.....	−0·018	−0·66	.....	.....
130	+41	395	2477	73	−0·079	+0·21	−0·083	0·00
131	−18	356	2496	.....	−0·013	−0·45	.....	.....
132	+22	306	2538	74	−0·035	−0·37	−0·020	−0·43
133	+37	486	2552	.....	−0·019	−0·29	.....	.....
134	−28	675	2561	.....	−0·017	+0·03	.....	.....
135	+34	381	2572	75	−0·048	−0·34	−0·027	−0·43
136	−13	400	2608	.....	−0·049	+0·66	.....	.....
137	+ 7	347	2619	.....	−0·015	−0·55	.....	.....
138	+82	51	2622	Nα	−0·171	−0·34	−0·305	+0·14
139	+29	371	2633	.....	−0·029	+0·21	.....	.....
140	+43	447	2645	.....	−0·021	−0·54	.....	.....
141	+ 8	345	2656	1058	+0·008	−0·17	+0·015	−0·19
142	+24	329	2706	1059	−0·005	−0·80	−0·011	−0·87
143	+33	395	2733	.....	−0·027	−0·49	.....	.....
144	+19	340	2767	81	0·000	−0·23	+0·002	−0·23
145	+12	315	2768	.....	+0·002	+0·08	.....	.....
146	+ 1	410	2770	1061	−0·017	−0·56	−0·001	−0·70
147	+46	552	2779	1063	−0·042	+0·20	−0·029	+0·03
148	− 1	322	2850	.....	+0·014	+0·10	.....	.....
149	−18	409	2853	1064	−0·040	−0·34	−0·043	−0·33
150	−26	857	2900	.....	+0·027	−0·46	.....	.....

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	°				s	″	s	″
151	−20	455	2941	.....	+0·033	−0·24	.....	.....
152	+29	417	2956	1068	0·000	−0·64	+0·010	−0·59
153	+ 7	388	2960	85	+0·003	−0·21	+0·014	−0·33
154	+ 8	385	2983	.....	+0·027	−0·60	.....	.....
155	+19	365	3003	.....	+0·001	−0·16	.....	.....
156	+35	497	3032	1070	+0·006	−0·35	+0·009	−0·37
157	+10	340	3085	.....	+0·018	+0·44	.....	.....
158	+51	599	3122	.....	+0·052	−0·09	.....	.....
159	− 8	489	3126	1074	+0·015	−0·72	+0·020	−0·63
160	+61	448	3169	.....	+0·003	−0·11	.....	.....
161	− 0	406	3192	91	+0·006	−0·11	+0·014	−0·20
162	−16	484	3211	.....	−0·031	−0·13	.....	.....
163	+58	504	3219	.....	−0·011	+0·39	.....	.....
164	+47	683	3258	.....	+0·032	−0·51	.....	.....
165	+80	86	3270	.....	−0·007	−0·42	.....	.....
166	+48	746	3277	93	+0·001	+0·26	+0·003	+0·15
167	+43	566	3278	1077	+0·012	−0·51	+0·017	−0·47
168	− 3	426	3283	.....	−0·010	+0·46	.....	.....
169	−26	996	3305	1078	−0·008	−0·40	+0·004	−0·68
170	+ 9	359	3309	98	−0·005	+0·13	+0·008	+0·17
171	+35	553	3335	.....	−0·017	−0·08	.....	.....
172	+69	179	3345	.....	−0·026	−0·32	.....	.....
173	−22	479	3348	.....	−0·048	+0·58	.....	.....
174	−13	530	3366	.....	−0·028	−0·31	.....	.....
175	+17	442	3369	.....	−0·025	+0·04	.....	.....
176	− 5	541	3493	.....	+0·046	−0·66	.....	.....
177	+14	492	3515	.....	+0·037	−0·38	.....	.....
178	+72	153	3527	.....	−0·104	−0·60	.....	.....
179	+ 7	450	3531	.....	0·000	−0·64	.....	.....
180	− 9	553	3539	104	+0·020	−0·13	+0·027	−0·08
181	+ 3	410	3547	.....	+0·009	+0·14	.....	.....
182	+20	480	3562	1081	+0·019	−0·31	+0·023	−0·43
183	+ 3	419	3643	107	+0·010	−0·43	+0·010	−0·43
184	−18	516	3645	1084	−0·045	+0·45	−0·050	+0·33
185	+52	654	3664	108	−0·038	−0·28	−0·013	−0·29
186	− 2	554	3730	.....	+0·019	+1·12	.....	.....
187	+40	673	3733	111	−0·044	−0·20	−0·033	−0·37
188	−14	604	3734	1087	−0·027	−0·71	+0·008	−0·98
189	+49	857	3740	112	−0·020	+0·15	−0·007	−0·04
190	+18	414	3742	.....	−0·028	+0·14	.....	.....
191	+28	499	3762	1088	−0·045	−0·51	−0·033	−0·70
192	+52	663	3781	.....	−0·030	−0·10	.....	.....
193	+31	553	3788	.....	+0·057	−0·30	.....	.....
194	+19	477	3805	114	+0·003	−0·13	+0·013	−0·21
195	+41	631	3810	.....	−0·054	−0·24	.....	.....
196	+47	779	3812	.....	−0·051	−0·08	.....	.....
197	+ 6	496	3827	.....	−0·054	0·00	.....	.....
198	+56	798	3870	.....	−0·011	−0·30	.....	.....
199	+38	690	3927	.....	−0·059	+0·19	.....	.....
200	+12	460	3941	.....	+0·021	−0·20	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
201	−19	651	3959	.....	−0·028	−0·65	.....	.....
202	+84	59	4030	Nβ	+0·045	−0·21	−0·183	−0·17
203	−26	1257	4031	.....	−0·058	−0·34	.....	.....
204	+64	391	4034	1096	−0·006	−0·01	+0·56	+0·07
205	+49	917	4041	120	+0·015	+0·53	+0·014	+0·51
206	+ 8	511	4070	121	+0·004	−0·41	+0·015	−0·60
207	− 4	586	4077	.....	−0·016	−0·37	.....	.....
208	+19	537	4117	.....	+0·009	+0·06	.....	.....
209	−11	667	4130	.....	+0·002	−0·10	.....	.....
210	+29	566	4131	.....	+0·022	+0·63	.....	.....
211	−23	1412	4167	.....	−0·060	+1·01	.....	.....
212	+12	486	4184	125	−0·031	+0·01	−0·026	−0·12
213	+34	674	4222	1098	−0·035	+0·07	−0·013	−0·12
214	+ 8	528	4231	.....	−0·022	−0·32	.....	.....
215	− 9	697	4244	127	+0·016	−0·23	+0·030	−0·19
216	−22	628	4258	1099	+0·007	−0·45	+0·028	−0·31
217	−17	699	4305	1100	−0·026	+0·28	−0·021	+0·20
218	+22	518	4307	.....	−0·013	−0·22	.....	.....
219	+ 0	616	4311	.....	−0·004	−0·46	.....	.....
220	+13	579	4346	.....	−0·017	−0·46	.....	.....
221	− 6	713	4347	.....	+0·005	−0·66	.....	.....
222	+40	813	4375	.....	+0·016	−0·21	.....	.....
223	+47	876	4427	131	+0·006	−0·51	+0·017	−0·59
224	−10	728	4450	135	−0·038	+0·03	−0·024	−0·10
225	+45	804	4459	.....	−0·028	+0·36	.....	.....
226	−10	729	4460	.....	+0·015	−0·23	.....	.....
227	+66	284	4463	.....	−0·101	0·00	.....	.....
228	+36	742	4464	.....	−0·040	−0·25	.....	.....
229	+27	556	4468	.....	−0·064	−0·15	.....	.....
230	+23	541	4541	139	−0·030	−0·46	−0·013	−0·46
231	−23	1565	4547	140	−0·021	+0·46	−0·005	+0·46
232	− 0	602	4584	.....	+0·019	−0·38	.....	.....
233	−21	703	4593	.....	−0·057	−0·42	.....	.....
234	+ 6	594	4662	.....	+0·016	−0·14	.....	.....
235	+57	752	4668	1105	−0·015	+0·19	+0·003	+0·24
236	+16	523	4677	1106	−0·020	−1·16	+0·001	−1·14
237	− 7	695	4683	1107	+0·010	−0·75	+0·046	−0·74
238	+31	666	4688	144	−0·014	−0·01	+0·005	−0·04
239	+86	51	4693	.....	−0·159	−0·01	.....	.....
240	+30	591	4720	.....	+0·034	−0·39	.....	.....
241	+ 2	628	4745	.....	+0·061	−0·42	.....	.....
242	+24	599	4757	.....	−0·053	+0·31	.....	.....
243	+39	895	4759	147	−0·075	+0·03	−0·054	+0·08
244	−13	781	4778	149	−0·066	−0·33	−0·051	−0·37
245	+13	621	4786	.....	−0·019	−0·82	.....	.....
246	+12	539	4805	150	+0·008	−0·02	+0·021	+0·09
247	+ 5	581	4862	151	−0·025	−0·30	0·000	−0·35
248	+73	210	4882	.....	+0·017	+0·17	.....	.....
249	+61	669	4898	.....	−0·008	−0·13	.....	.....
250	−13	806	4907	.....	+0·020	−0·70	.....	.....

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	°				s	″	s	″
251	+42	897	4958	.....	+0·012	−0·94	.....	
252	−22	754	4961	.....	+0·006	−0·31	.....	
253	+37	882	4973	.....	−0·034	−0·47	.....	
254	− 3	696	5013	.....	−0·001	+0·89	.....	
255	+ 5	601	5042	.....	−0·013	−0·82	.....	
256	− 7	764	5056	154	−0·023	0·00	−0·009	−0·38
257	−17	816	5062	.....	−0·012	−0·14	.....	
258	+48	1059	5067	.....	−0·018	−0·39	.....	
259	+53	750	5132	.....	−0·001	−0·24	.....	
260	+21	618	5189	.....	−0·050	−0·34	.....	
261	+83	104	5208	.....	−0·046	−0·28	.....	
262	+15	612	5226	159	0·000	+0·06	+0·013	−0·02
263	+14	682	5252	.....	+0·004	−0·85	.....	
264	−16	838	5255	1119	−0·051	−0·29	−0·067	−0·32
265	− 7	798	5267	.....	+0·017	+0·20	.....	
266	+85	63	5301	Nc	+0·042	−0·25	−0·036	−0·22
267	+17	712	5304	162		+0·38		+0·28
268	− 4	818	5327	1120	−0·004	−0·16	+0·008	−0·28
269	+57	800	5358	.....	−0·030	−0·22	.....	
270	+ 8	687	5378	.....	−0·010	+0·18	.....	
271	+ 1	753	5399	.....	+0·005	−0·65	.....	
272	+69	258	5401	1122	−0·023	−0·75	+0·023	−0·55
273	+18	640	5430	164	−0·004	+0·08	+0·022	−0·02
274	−21	878	5435	.....	−0·042	−0·64	.....	
275	+27	661	5447	.....	−0·020	−0·57	.....	
276	+15	639	5482	.....	−0·022	+0·27	.....	
277	+36	907	5515	.....	+0·012	−0·33	.....	
278	+16	629	5605	168	−0·043	+0·32	−0·019	+0·29
279	+ 0	798	5627	.....	−0·020	−0·29	.....	
280	− 2	963	5635	.....	+0·005	−0·54	.....	
281	+20	785	5644	.....	−0.005	−0·09	.....	
283	+11	639	5684	.....	+0·011	−0·33	.....	
284	+76	174	5711	.....	+0·119	−0·31	.....	
285	+22	739	5716	174	−0·052	−0·16	−0·024	−0·17
286	+43	1043	5719	.....	−0·038	−0·35	.....	
287	+49	1230	5726	1128	−0·026	−0·03	+0·003	−0·14
288	+32	827	5749	.....	−0·005	+0·35	.....	
289	− 8	929	5768	1131	+0·011	+0·25	+0·038	+0·23
290	−21	966	5794	.....	−0·037	+0·36	.....	
291	− 3	876	5796	176	−0·003	−0·04	+0·015	−0·08
292	+55	928	5817	.....	−0·035	+0·24	.....	
293	+29	741	5841	.....	−0·031	+0·19	.....	
294	−14	970	5882	.....	−0·049	−0·65	.....	
295	+61	739	5927	.....	+0·004	−0·10	.....	
296	+80	155	5962	.....	+0·083	−0·46	.....	
297	+ 2	810	5978	180	−0·020	−0·21	+0·007	−0·29
298	+ 7	755	5986	.....	−0·030	+0·19	.....	
299	−16	992	6012	.....	−0·015	−0·47	.....	
300	− 5	1091	6032	.....	−0·017	−0·36	.....	
301	+23	777	6044	.....	−0·057	−1·40	.....	

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	°				s	″	s	″
302	+37	1005	6064	.....	−0·002	−0·34	.....	.....
303	+ 1	872	6068	.....	−0·002	−0·55	.....	.....
304	+14	796	6072	.....	−0·016	+0·87	.....	.....
305	+43	1166	6123	183	−0·028	+0·17	−0·008	+0·12
306	+41	1044	6153	.....	−0·012	−0·07	.....	.....
307	+21	751	6158	184	−0·043	+0·10	−0·017	+0·04
308	+58	804	6193	.....	−0·055	−0·01	.....	.....
309	−24	2795	6195	.....	−0·037	−0·48	.....	.....
310	− 3	998	6206	.....	−0·044	−0·15	.....	.....
311	+33	953	6222	.....	−0·026	−0·30	.....	.....
312	−22	1000	6231	186	−0·012	−0·38	+0·002	−0·61
313	−12	1076	6268	.....	−0·002	−1·20	.....	.....
314	− 5	1162	6274	188	−0·040	−0·46	−0·010	−0·54
315	+19	853	6279	.....	+0·040	+0·16	.....	.....
316	+73	274	6288	.....	−0·013	−0·05	.....	.....
317	+ 9	743	6300	1142	−0·032	−0·13	+0·004	−0·20
318	+27	732	6301	1141	−0·007	+0·89	+0·015	+0·70
319	+46	970	6311	.....	−0·045	+0·26	.....	.....
320	+67	371	6356	.....	+0·079	−0·08	.....	.....
321	− 8	1059	6392	.....	−0·026	+0·37	.....	.....
322	− 8	1063	6410	194	−0·032	−0·47	−0·010	−0·44
323	+45	1077	6427	193	−0·042	+0·18	−0·024	+0·06
324	+85	74	6447	Nγ	+0·036	−0·05	−0·076	+0·13
325	− 7	1028	6480	195	−0·036	−0·58	−0·009	−0·45
326	+21	816	6506	.....	−0·008	−0·10	.....	.....
327	+ 2	916	6509	.....	−0·043	−0·32	.....	.....
328	−18	1051	6511	.....	−0·004	+0·52	.....	.....
329	+54	882	6527	.....	−0·024	−0·52	.....	.....
330	+10	758	6537	.....	+0·004	−0·37	.....	.....
331	+ 8	933	6574	.....	−0·030	−0·94	.....	.....
332	+70	351	6633	.....	−0·074	−0·09	.....	.....
333	+37	1175	6636	.....	−0·049	−0·10	.....	.....
334	+ 6	919	6668	201	−0·055	−0·03	−0·028	+0·03
335	+28	795	6681	202	0·000	−0·32	+0·032	−0·27
336	+17	928	6714	1148	−0·020	−0·29	+0·012	−0·46
337	−12	1169	6726	.....	−0·013	−0·48	.....	.....
338	−21	1174	6747	.....	−0·004	−1·00	.....	.....
339	− 0	960	6756	.....	+0·034	−0·44	.....	.....
340	+29	909	6772	.....	+0·003	+0·32	.....	.....
341	+85	78	6778	.....	−0·500	−0·25	.....	.....
342	+41	1206	6797	.....	+0·045	−0·06	.....	.....
343	− 0	983	6847	206	−0·009	−0·24	+0·016	−0·40
344	−17	1166	6875	207	−0·048	−0·09	−0·029	−0·02
345	+ 3	964	6896	.....	+0·015	−0·56	.....	.....
346	+64	536	6917	.....	−0·098	−0·09	.....	.....
347	− 1	969	6960	210	−0·040	−0·47	−0·014	−0·56
348	− 6	1255	6971	.....	−0·009	+0·51	.....	.....
349	+10	828	6975	.....	−0·005	−0·62	.....	.....
350	+21	908	6985	211	−0·034	+0·03	−0·003	+0·07
351	−27	2395	7025	1153	+0·008	+0·39	+0·004	+0·11

Cat. No.	B. D. or C. D. No.	G. C. No.	FK3 No.	O - G. C. Δα	O - G. C. Δδ	O - FK3 Δα	O - FK3 Δδ
	°			s	″	s	″
352	+24 909	7050	.....	−0·068	−0·88	.....	
353	−17 1199	7058	.....	−0·034	−0·67	.....	
354	+56 1050	7105	.....	−0·039	−0·68	.....	
355	−20 1171	7193	.....	−0·061	−1·24	.....	
356	+15 926	7224	.....	−0·091	−0·30	.....	
357	+ 9 954	7228	.....	+0·005	+0·59	.....	
358	+29 997	7232	.....	−0·099	−0·55	.....	
359	− 9 1235	7264	220		−0·15		−0·11
360	+85 80	7273	Nδ	−0·120	−0·29	−0·001	−0·24
361	−14 1251	7315	.....	−0·003	+0·08	.....	
362	+ 7 1055	7451	224	−0·024	−0·38	−0·007	−0·59
363	+11 975	7488	.....	−0·008	−0·10	.....	
364	−18 1247	7519	.....	−0·054	+0·05	.....	
365	+44 1328	7543	227	−0·016	−0·88	+0·009	−0·83
366	+ 0 1239	7556	1161	−0·003	−0·32	+0·023	−0·52
367	− 9 1285	7565	.....	−0·082	−0·48	.....	
368	+33 1209	7568	1162	−0·074	−0·44	−0·018	−0·82
369	+75 247	7606	.....	−0·003	−0·39	.....	
370	+22 1140	7610	.....	−0·022	+0·30	.....	
371	−25 2865	7623	.....	−0·033	−0·23	.....	
372	+ 9 1064	7635	.....	−0·041	−0·18	.....	
373	+42 1473	7641	.....	−0·073	−0·08	.....	
374	+51 1146	7663	.....	−0·068	−0·15	.....	
375	−14 1331	7742	.....	−0·009	−0·78	.....	
376	+26 1082	7753	.....	+0·020	−0·50	.....	
377	− 3 1297	7762	.....	+0·012	0·00	.....	
378	+14 1152	7772	232	−0·029	+0·27	+0·001	+0·12
379	−21 1353	7779	.....	−0·042	+1·08	.....	
380	+48 1352	7853	.....	−0·070	−0·64	.....	
381	+65 517	7856	233	−0·057	−0·12	−0·013	−0·30
382	+19 1253	7887	.....	−0·061	−0·12	.....	
383	+22 1241	7969	236	−0·035	−0·77	−0·009	−0·84
384	.....	7982	.....	+0·011	+0·14	.....	
385	+36 1388	7983	1167	+0·006	−0·41	+0·036	−0·61
386	− 6 1469	7986	.....		+0·14	.....	
387	+61 869	8016	.....	−0·125	−0·30	.....	
388	+ 1 1275	8017	.....	−0·029	−0·36	.....	
389	+12 1084	8033	1169	−0·050	−0·23	−0·029	−0·06
390	+23 1275	8039	.....	−0·036	+0·10	.....	
391	+59 959	8068	237	−0·076	−0·27	−0·022	−0·28
392	+14 1235	8073	.....	−0·010	+0·34	.....	
393	−16 1426	8080	.....	−0·047	−0·37	.....	
394	− 7 1373	8132	1170	−0·017	−0·63	−0·003	−0·59
395	+30 1211	8183	.....	−0·068	+0·13	.....	
396	+22 1304	8208	241	−0·026	−0·27	+0·002	−0·25
397	−17 1467	8223	243	−0·030	+0·90	−0·003	+1·00
398	+ 4 1236	8240	244	−0·030	−0·13	−0·010	−0·23
399	+ 8 1316	8248	.....	−0·014	+0·40	.....	
400	−11 1478	8265	1171	+0·004	+0·12	+0·014	+0·07
401	+ 70401	8293	.....	−0·017	+0·01	.....	

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	°				s	″	s	″
402	+42	1552	8300	1172	−0·011	−0·26	−0·012	−0·24
403	− 1	1242	8335	.....	−0·029	−0·11	.....	.....
404	− 4	1526	8378	246	−0·023	−0·31	+0·007	−0·28
405	+16	1159	8382	.....	−0·002	+0·02	.....	.....
406	+28	1138	8426	.....	−0·026	+0·08	.....	.....
407	−22	1429	8427	.....	−0·019	+1·44	.....	.....
408	+47	1310	8472	.....	−0·099	−0·25	.....	.....
409	+52	1097	8501	.....	−0·054	−0·68	.....	.....
410	+86	79	8505	.....	−0·125	−0·06	.....	.....
411	+82	177	8605	.....	+0·071	−0·04	.....	
412	− 5	1710	8609	.....	−0·041	−0·24	.....	.....
413	−18	1480	8614	.....	+0·021	+0·16	.....	.....
414	+16	1223	8633	251	−0·023	+0·02	+0·004	−0·04
415	+ 2	1315	8642	.....	−0·042	−0·26	.....	.....
416	+22	1416	8672	.....	−0·005	−0·36	.....	.....
417	+11	1273	8731	.....	−0·052	−0·68	.....	.....
418	+32	1378	8754	.....	−0·058	−0·48	.....	.....
419	+25	1406	8786	.....	−0·036	−0·44	.....	.....
420	−25	3546	8808	.....	+0·005	+0·68	.....	.....
421	+13	1396	8823	256	−0·037	−0·11	−0·002	−0·02
422	+57	1004	8826	.....	−0·093	+0·03	.....	.....
423	+ 8	1486	8856	1177	−0·047	−0·20	−0·018	−0·32
424	+48	1436	8858	1176	−0·035	+0·09	+0·001	+0·01
425	−20	1576	8884	.....	−0·037	−0·15	.....	.....
426	−14	1599	8922	.....	−0·059	−0·01	.....	.....
427	− 2	1776	8923	1179	−0·006	−0·60	+0·018	−0·75
428	+16	1298	8927	.....	−0·051	−0·06	.....	.....
429	+25	1469	8974	.....	−0·028	−0·80	.....	.....
430	+44	1551	9042	.....	−0·068	+0·19	.....	.....
431	−11	1681	9051	266	−0·030	−0·29	−0·008	−0·36
432	+10	1335	9100	.....	−0·006	−0·18	.....	.....
433	−16	1661	9107	.....	−0·042	−0·47	.....	.....
434	+38	1656	9151	.....	+0·002	+0·25	.....	.....
435	+ 3	1488	9175	.....	−0·021	−0·46	.....	.....
436	−28	3666	9188	268	−0·036	−0·03	−0·016	−0·20
437	− 8	1662	9226	1181	−0·020	+0·18	−0·008	+0·12
438	−25	3911	9253	.....	+0·009	−0·14	.....	.....
439	+24	1502	9263	1182	−0·036	−0·35	−0·002	−0·30
440	+20	1687	9313	269	−0·069	−0·22	−0·031	−0·25
441	−15	1625	9320	271	−0·008	−0·12	+0·014	−0·07
442	+60	1026	9322	.....	−0·027	−0·16	.....	.....
443	−21	1732	9351	.....	−0·053	+0·95	.....	.....
444	−11	1790	9389	.....	−0·059	−0·48	.....	.....
445	+34	1533	9405	.....	−0·018	+0·04	.....	.....
446	+ 7	1607	9409	1185	−0·015	+0·01	+0·014	−0·08
447	+16	1397	9421	.....	−0·029	−0·36	.....	.....
448	−26	3916	9443	273	−0·051	+0·18	−0·026	+0·14
449	+72	352	9489	.....	+0·030	−0·38	.....	.....
450	+27	1327	9493	.....	−0·045	+0·17	.....	.....
451	− 0	1634	9505	.....	+0·005	+0·36	.....	.....

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	°				s	″	s	″
452	− 0	1636	9518	1187	−0·043	−0·27	−0·015	−0·29
453	+47	1411	9525	.....	+0·089	−0·22	.....	.....
454	+51	1295	9526	.....	+0·006	+0·40	.....	.....
455	+12	1469	9592	.....	−0·001	+0·44	.....	.....
456	− 6	2032	9698	.....	−0·072	+0·48	.....	.....
457	+16	1443	9701	277	−0·024	+0·20	+0·022	−0·08
458	+ 2	1640	9739	.....	−0·018	+0·44	.....	.....
459	−16	1898	9758	.....	−0·045	+0·72	.....	.....
460	+87	51	9772	Nd	−0·112	−0·12	−0·322	−0·08
461	+37	1707	9796	.....	−0·053	+0·16	.....	.....
462	+20	1775	9808	.....	−0·009	−0·09	.....	.....
463	+82	201	9851	.....	−0·023	−0·26	.....	.....
464	+28	1385	9897	282	−0·043	−0·34	+0·001	−0·35
465	−13	2001	9905	1192	+0·026	−0·34	+0·002	−0·23
466	+ 8	1774	9947	285	−0·047	−0·27	−0·009	−0·36
467	−22	1874	9960	.....	−0·013	+0·90	.....	.....
468	+78	254	9972	.....	+0·061	−0·08	.....	.....
469	+ 9	1660	9974	.....	−0·043	−0·28	.....	.....
470	+28	1400	10015	.....	−0·049	+0·33	.....	.....
471	+12	1567	10024	1193	−0·006	+0·03	+0·022	−0·11
472	− 4	1979	10053	.....	−0·005	+0·86	.....	.....
473	+17	1596	10073	.....	−0·030	−0·24	.....	.....
474	+46	1286	10168	1195	−0·089	+0·23	−0·045	+0·10
475	− 7	2065	10192	.....	−0·006	+0·29	.....	.....
476	−19	1967	10208	1197	−0·075	−0·61	−0·016	−0·52
477	− 3	1979	10217	289	−0·017	−0·08	+0·017	−0·01
478	+14	1713	10225	.....	+0·004	+0·49	.....	.....
479	+33	1560	10230	.....	−0·010	+0·97	.....	.....
480	+54	1167	10234	.....	+0·005	−0·03	.....	.....
481	+ 5	1739	10277	291		−0·20		−0·38
482	+23	1780	10318	.....	−0·024	−0·63	.....	.....
483	+ 0	2054	10381	.....	−0·039	+0·28	.....	.....
484	+39	1998	10412	.....	−0·044	+0·03	.....	.....
485	+65	593	10420	.....	−0·047	+0·19	.....	.....
486	+63	733	10422	.....	−0·048	+0·37	.....	.....
487	+28	1463	10438	295	−0·032	−0·06	+0·009	−0·02
488	+18	1733	10456	1200	−0·032	+0·09	−0·001	+0·03
489	−22	2027	10501	.....	+0·020	+0·01	.....	.....
490	+ 5	1790	10509	.....	+0·023	+0·02	.....	.....
491	+26	1656	10546	.....	−0·035	+0·34	.....	.....
492	−24	6030	10562	1204	−0·029	−0·60	−0·008	−0·61
493	−10	2253	10606	.....	−0·051	+1·06	.....	.....
494	+ 2	1808	10622	1205	−0·052	0·00	−0·015	−0·03
495	−13	2267	10629	298		−0·66		−0·53
496	− 2	2322	10635	.....	−0·059	+1·04	.....	.....
497	+20	1946	10707	.....	−0·040	−0·44	.....	.....
498	+30	1612	10720	.....	−0·020	−0·36	.....	.....
499	+44	1693	10757	1209	−0·026	−0·21	−0·017	−0·23
500	−29	5236	10774	1210	−0·017	+1·23	−0·006	+0·99
501	+ 2	1833	10776	.....	−0·019	−0·33	.....	.....

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	°				s	″	s	″
502	+13	1811	10801	.....	−0·026	−0·93	.....	.....
503	−18	2118	10825	1212	−0·008	+0·36	+0·015	+0·50
504	+ 9	1843	10880	.....	−0·015	−0·20	.....	.....
505	− 5	2339	10900	1213	−0·025	+0·24	−0·012	+0·39
506	+13	1831	10959	.....	+0·073	−0·37	.....	.....
507	−25	5530	10963	.....	−0·027	+0·07	.....	.....
508	− 0	1903	10986	.....	−0·012	+0·47	.....	.....
509	−20	2395	11027	.....	−0·019	+0·79	.....	.....
510	+84	169	11031	Nε	−0·134	−0·39	−0·021	−0·26
511	−23	6828	11034	308	−0·052	+0·37	−0·033	+0·17
512	+35	1767	11073	1214	−0·012	−0·66	+0·019	−0·72
513	+53	1221	11087	.....	−0·037	−0·38	.....	.....
514	+25	1865	11091	.....	−0·022	+0·21	.....	.....
515	+15	1775	11114	.....	−0·039	+0·09	.....	.....
516	+49	1711	11125	.....	−0·001	+0·47	.....	.....
517	+56	1278	11158	.....	+0·016	−0·14	.....	.....
518	+ 9	1917	11254	312	−0·003	−0·19	+0·026	−0·21
519	+ 4	1945	11285	1216	−0·032	+0·30	−0·028	+0·45
520	+82	235	11296	.....	−0·042	+0·01	.....	.....
521	−15	2362	11299	.....	+0·002	+0·54	.....	.....
522	+72	409	11302	.....	−0·056	−0·11	.....	.....
523	− 9	2471	11346	1218	−0·007	+0·11	+0·030	−0·04
524	+24	1909	11363	.....	−0·018	−0·30	.....	.....
525	+61	1043	11381	.....	−0·061	−0·09	.....	.....
526	+32	1725	11444	.....	−0·021	+0·11	.....	.....
527	+11	1830	11454	.....	−0·049	+0·12	.....	.....
528	−23	7277	11491	1221	+0·012	+0·14	+0·006	−0·02
529	+17	1842	11494	.....	−0·026	−0·23	.....	.....
530	− 3	2339	11499	316	−0·027	−0·07	+0·005	−0·13
531	+ 8	2053	11505	.....	−0·051	−0·19	.....	.....
532	−14	2517	11512	.....	−0·032	+1·07	.....	.....
533	− 3	2345	11523	.....	−0·003	−0·53	.....	.....
534	+26	1789	11609	.....	−0·009	−0·48	.....	.....
535	+36	1836	11702	.....	−0·040	−0·41	.....	.....
536	+10	1837	11807	.....	−0·021	+0·26	.....	.....
537	−18	2416	11813	.....	−0·082	−0·47	.....	.....
538	+15	643	11817	.....	−0·036	+0·16	.....	.....
539	+ 6	2001	11823	1223	−0·029	−0·23	−0·001	−0·35
540	+20	2149	11874	.....	−0·020	−0·93	.....	.....
541	+51	1443	11882	.....	−0·015	−0·18	.....	.....
542	+82	253	11900	.....	−0·130	0·00	.....	.....
543	+46	1422	11903	1225	−0·062	−0·38	−0·018	−0·42
544	+ 3	2039	11987	.....	−0·010	−0·04	.....	.....
545	+18	2027	12022	326	−0·048	+0·16	−0·010	−0·03
546	+31	1876	12037	.....	+0·008	+0·55	.....	.....
547	+ 6	2030	12041	.....	−0·017	+0·69	.....	.....
548	−20	2667	12052	1229	−0·081	+1·06	−0·092	+0·08
549	−10	2634	12086	.....	−0·036	−1·37	.....	.....
550	+ 6	2036	12102	.....	−0·022	−0·48	.....	.....
551	− 1	2130	12122	.....	−0·016	−0·51	.....	.....

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	°				s	″	s	″
552	+89	13	12154	.....	−0·113	+0·12	.....	
553	+44	1794	12221	.....	−0·042	−0·38	.....	
554	+59	1198	12234	.....	−0·041	−0·04	.....	
555	− 8	2518	12305	.....	−0·002	+0·45	.....	
556	+78	297	12309	.....	+0·030	−0·64	.....	
557	+ 6	2060	12327	334	−0·011	−0·37	+0·019	−0·34
558	−17	2691	12331	1231	−0·084	+0·19	−0·075	+0·71
559	+12	1941	12339	.....	−0·048	+0·73	.....	
560	+22	2029	12362	.....	−0·035	+0·34	.....	
561	+12	1948	12406	337	−0·036	−0·18	−0·011	−0·30
562	+48	1707	12407	335	−0·026	+0·42	−0·002	+0·37
563	+38	1986	12432	.....	−0·026	+0·39	.....	
564	+ 0	2449	12487	1235	−0·031	−0·43	−0·002	−0·55
565	+47	1633	12503	341	−0·037	+0·08	0·000	−0·11
566	− 4	2530	12522	1236	−0·028	−0·97	+0·010	−1·06
567	+ 5	2116	12564	.....	−0·021	−0·44	.....	
568	+30	1817	12593	.....	−0·024	+0·43	.....	
569	+11	1984	12596	1238	−0·007	−0·06	+0·023	−0·21
570	+84	196	12603	Nζ	+0·063	−0·19	+0·066	+0·12
571	+27	1715	12615	.....	−0·033	+1·09	.....	
572	−26	6766	12636	.....	−0·083	+0·15	.....	
573	−11	2565	12645	1240	+0·024	+0·35	+0·055	+0·51
574	+64	723	12646	.....	−0·008	−0·16	.....	
575	+18	2138	12685	.....	−0·029	−0·38	.....	
576	+ 2	2167	12743	347	−0·037	+0·05	−0·014	+0·04
577	+54	1285	12761	.....	−0·028	+0·82	.....	
578	+ 1	2267	12796	.....	−0·014	−0·36	.....	
579	+47	1658	12799	.....	−0·063	−0·03	.....	
580	− 5	2762	12800	.....	−0·037	−0·52	.....	
581	+74	393	12814	.....	−0·060	+0·25	.....	
582	+23	2072	12815	.....	−0·034	+0·07	.....	
583	−16	2749	12849	.....	−0·099	−0·20	.....	
584	+35	1979	12880	352	−0·078	−0·03	−0·042	−0·06
585	+57	1214	12883	.....	+0·009	+0·45	.....	
586	+13	2074	12899	.....	−0·007	+0·21	.....	
587	−25	7114	12916	1243	−0·005	−0·23	−0·002	−0·29
588	−28	7196	12952	.....	+0·009	+0·81	.....	
589	+37	1978	12957	.....	+0·002	+0·13	.....	
590	+17	2078	12990	.....	−0·006	−0·41	.....	
591	−24	8060	12997	.....	−0·052	−0·43	.....	
592	− 8	2680	13044	354	−0·015	−0·20	+0·007	−0·11
593	− 2	2901	13080	.....	+0·023	−0·22	.....	
594	+34	1999	13112	.....	−0·020	+0·10	.....	
595	+28	1768	13128	.....	−0·018	+0·49	.....	
596	+10	2014	13150	.....	−0·020	+0·71	.....	
597	+52	1401	13157	358	−0·039	+0·29	+0·004	+0·31
598	+ 2	2217	13172	.....	−0·021	+0·36	.....	
599	+81	302	13174	Ne	−0·018	+0·20	−0·043	+0·06
600	−12	2926	13185	.....	−0·059	+1·27	.....	
601	+52	1402	13212	.....	−0·061	+0·71	.....	

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
602	−18	2728	13254	.....	−0·048	−0·65	.....	.....
603	+67	602	13304	.....	−0·117	+0·10	.....	.....
604	+ 5	2207	13316	1249	−0·038	−0·56	−0·026	−0·68
605	+43	1943	13318	.....	−0·076	−0·04	.....	.....
606	+20	2351	13322	.....	−0·024	−0·32	.....	.....
607	− 0	2231	13341	1250	−0·026	+0·71	−0·004	+0·60
608	− 9	2898	13343	.....	+0·017	+0·60	.....	.....
609	+10	2044	13366	365	−0·010	+0·13	+0·010	−0·04
610	+40	2241	13372	.....	−0·011	−0·65	.....	.....
611	+49	1868	13379	.....	−0·022	+0·18	.....	.....
612	+35	2042	13388	.....	−0·020	+0·50	.....	.....
613	+14	2136	13414	1252	−0·013	−0·93	+0·009	−1·00
614	−22	2705	13433	.....	+0·008	−0·08	.....	.....
615	+24	2129	13443	367	−0·026	−0·04	+0·003	−0·11
616	+19	2254	13444	1253	−0·019	−0·23	+0·003	−0·27
617	+ 7	2181	13452	.....	−0·014	+0·12	.....	.....
618	+59	1268	13540	368	−0·020	+0·17	+0·021	+0·04
619	+25	2169	13569	.....	−0·029	+0·04	.....	.....
620	+61	1151	13613	.....	−0·002	−0·05	.....	.....
621	+33	1920	13673	.....	−0·020	+0·21	.....	.....
622	− 6	3033	13674	1257	+0·033	+0·34	+0·054	+0·15
623	+57	1242	13735	.....	−0·033	+0·51	.....	.....
624	+22	2148	13740	.....	−0·033	+0·18	.....	.....
625	+ 8	2301	13755	378	−0·007	−0·08	+0·015	−0·13
626	− 0	2285	13804	.....	−0·005	−0·63	.....	.....
627	+84	225	13814	.....	+0·015	+0·28	.....	.....
628	−23	8973	13848	1260	−0·049	−0·12	−0·037	−0·11
630	+ 6	2259	13888	.....	−0·007	−0·13	.....	.....
631	+17	2171	13899	379	−0·002	−0·18	+0·025	−0·29
632	+12	2149	13926	380		+0·09		+0·02
633	+19	2307	13939	.....	−0·032	+0·31	.....	.....
634	−12	3101	13970	.....	+0·016	+0·53	.....	.....
635	+41	2063	13976	.....	−0·011	−0·07	.....	.....
636	−11	2820	13982	381	−0·023	−0·33	−0·006	−0·35
637	+38	2110	13985	.....	−0·006	−0·21	.....	.....
638	+28	1852	14014	.....	−0·029	+0·33	.....	.....
639	+79	328	14041	.....	+0·057	+0·30	.....	.....
640	+24	2207	14096	.....	+0·010	−0·09	.....	.....
641	+71	534	14102	.....	−0·049	+0·05	.....	.....
642	+14	2228	14110	.....	−0·021	−0·35	.....	.....
643	+43	2005	14113	383	−0·030	−0·25	−0·016	−·031
644	−18	2885	14116	.....	−0·029	+0·47	.....	.....
645	− 7	3001	14129	1263	−0·001	−0·67	+0·023	−0·69
646	+54	1367	14181	.....	+0·025	+0·17	.....	.....
647	+ 3	2352	14204	1266	−0·025	−0·38	+0·003	−0·51
648	−22	2904	14223	.....	−0·035	+0·52	.....	.....
649	+42	2115	14232	386	−0·018	+0·33	+0·001	+0·09
650	+34	2120	14252	1267	−0·046	−0·08	−0·018	−0·23
651	+ 9	2351	14301	.....	−0·006	+0·32	.....	.....
652	+84	234	14305	.....	−0·251	−0·28	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O - G. C. Δα	O - G. C. Δδ	O - FK3 Δα	O - FK3 Δδ
	°				s	″	s	″
653	−16	3052	14326	389	−0·006	+0·34	+0·007	+0·33
654	+60	1263	14345	.....	+0·019	+0·71	.....	.....
655	+83	297	14367	Nf	−0·064	+0·10	−0·009	+0·07
656	+16	2123	14380	.....	−0·032	−0·81	.....	.....
657	+29	2057	14409	1271	−0·046	+0·21	−0·022	+0·27
658	+10	2166	14487	396	−0·010	0·00	+0·010	−0·03
659	+41	2101	14491	.....	−0·027	+1·12	.....	.....
660	+35	2154	14501	.....	−0·046	+0·53	.....	.....
661	+22	2236	14525	.....	−0·060	+0·45	.....	.....
662	+ 2	2334	14543	.....	+0·010	−0·13	.....	.....
663	−11	2918	14582	1274	+0·029	0·00	+0·037	+0·26
664	− 8	2963	14596	.....	+0·031	−0·23	.....	.....
665	−16	3100	14631	.....	−0·028	−0·22	.....	.....
666	+47	1797	14659	.....	−0·083	+0·90	.....	.....
667	+81	349	14692	.....	−0·121	−0·03	.....	.....
669	+ 5	2384	14745	.....	−0·007	−0·44	.....	.....
670	−23	9500	14771	.....	−0·045	−0·97	.....	.....
671	+19	2371	14813	1279	+0·002	−0·04	+0·028	−0·18
672	−25	8237	14829	1280	+0·031	+0·52	+0·011	+0·56
673	− 1	2446	14877	.....	−0·012	+0·34	.....	.....
674	+11	2283	14889	409	−0·003	+0·05	+0·011	−0·17
675	+28	1931	14897	.....	−0·034	+0·26	.....	.....
676	+53	1440	14937	.....	+0·036	0·00	.....	.....
677	−12	3293	14994	.....	−0·015	−0·44	.....	.....
678	+ 1	2501	15022	.....	−0·031	−0·01	.....	.....
679	+20	2538	15073	.....	−0·043	−0·19	.....	.....
680	−18	3072	15085	.....	+0·001	+0·32	.....	.....
681	+36	2139	15089	.....	−0·013	+0·01	.....	.....
682	− 9	3182	15091	.....	+0·023	−0·11	.....	.....
683	+12	2284	15102	.....	−0·005	+0·75	.....	.....
684	+ 4	2407	15125	1284	−0·012	−0·06	+0·006	−0·26
685	+57	1302	15145	416	−0·013	+0·33	+0·016	+0·29
686	− 2	3270	15176	1285	−0·041	0·00	−0·018	+0·05
687	+62	1160	15179	.....	+0·009	+0·66	.....	.....
688	+62	1161	15185	417	+0·050	−0·12	+0·094	−0·15
689	+32	2102	15223	.....	−0·001	0·00	.....	.....
690	+ 8	2455	15235	418	−0·020	−0·33	0·000	−0·43
691	−10	3190	15256	1286	−0·005	+0·52	−0·009	+0·73
692	+18	2452	15273	.....	+0·002	−0·15	.....	.....
693	−20	3347	15274	.....	−0·023	+0·45	.....	.....
694	+72	515	15304	.....	+0·031	−0·65	.....	.....
695	+25	2344	15319	.....	−0·018	−0·10	.....	.....
696	+82	325	15335	.....	0·000	+0·68	.....	.....
697	+45	1897	15340	420	−0·078	+0·23	−0·051	+0·04
699	+86	161	15376	Nη	−0·176	+0·31	+0·060	+0·23
700	+69	602	15378	.....	−0·009	−0·12	.....	.....
701	−22	3095	15385	421	−0·020	+0·19	−0·016	+0·12
702	+55	1446	15399	.....	−0·005	+0·06	.....	.....
703	+21	2298	15438	422	−0·055	+0·58	−0·033	+0·41
704	+16	2234	15441	423	−0·006	+0·11	+0·011	−0·09

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
705	+23	2322	15460	.....	−0·057	−0·12	.....	
706	−18	3141	15469	.....	+0·008	+1·43	.....	
707	+14	2367	15487	.....	−0·006	−0·46	.....	
708	− 6	3344	15514	.....	−0·005	−0·03	.....	
709	+ 2	2409	15520	.....	−0·008	−0·24	.....	
710	+38	2225	15558	1293	−0·025	+0·31	−0·012	+0·25
711	− 0	2428	15566	.....	−0·017	−0·08	.....	
712	−13	3345	15567	426	−0·007	−0·06	+0·010	−0·16
713	+ 6	2437	15600	427	−0·013	−0·36	+0·004	−0·62
714	+17	2356	15677	.....	+0·012	−0·05	.....	
715	+27	2021	15682	1295	−0·042	−0·48	−0·029	−0·35
717	+ 9	2494	15694	.....	+0·010	−0·05	.....	
718	−20	3420	15704	.....	+0·020	+1·04	.....	
719	+30	2163	15772	.....	+0·003	+0·11	.....	
720	+81	373	15795	.....	+0·098	−0·13	.....	
721	+70	665	15799	433	+0·010	+0·39	+0·031	+0·24
722	+ 3	2521	15867	.....	−0·015	−0·17	.....	
723	− 3	3144	15878	.....	−0·046	+0·31	.....	
724	+21	2331	15879	.....	−0·033	+0·24	.....	
725	+11	2376	15889	.....	−0·027	+0·17	.....	
726	− 0	2458	15927	437	−0·009	−0·08	+0·008	−0·26
727	+78	392	15932	.....	−0·117	−0·61	.....	
728	+47	1894	15970	.....	−0·013	+0·11	.....	
729	−15	3323	16008	.....	−0·007	+0·71	.....	
730	− 7	3271	16027	.....	+0·004	−0·48	.....	
731	+36	2216	16127	.....	−0·005	−0·35	.....	
732	+48	1966	16137	441	−0·056	+0·14	−0·041	−0·08
733	+56	1544	16153	.....	−0·042	−0·09	.....	
734	+62	1198	16158	1303	−0·056	−0·07	−0·009	+0·10
735	+ 9	2549	16171	.....	−0·028	+0·13	.....	
736	+29	2214	16177	.....	−0·033	+0·16	.....	
737	+15	2383	16189	444	−0·016	−0·07	+0·001	−0·24
738	+ 2	2489	16215	445	−0·023	−0·06	−0·006	−0·26
739	−26	8807	16214	.....	+0·010	+1·07	.....	
740	− 4	3152	16220	1306	−0·006	+0·03	−0·004	−0·18
741	−11	3190	16231	.....	−0·041	+0·38	.....	
743	+16	2307	16255	.....	−0·012	−0·16	.....	
744	+54	1475	16268	447	−0·018	−0·25	+0·004	−0·39
745	−16	3358	16319	1309	−0·065	−0·15	−0·046	−0·20
746	+41	2253	16347	.....	−0·010	+0·12	.....	
747	+23	2174	16368	1310	−0·035	+0·26	−0·016	+0·13
748	+20	2664	16410	.....	+0·001	−0·39	.....	
749	− 9	3413	16421	.....	−0·094	+0·01	.....	
750	+ 7	2502	16425	1311	−0·010	−0·21	+0·006	−0·36
751	+13	2482	16428	.....	−0·014	+0·55	.....	
752	+65	863	16437	.....	−0·062	+0·54	.....	
753	+86	176	16496	Nθ	+0·102	+0·76	−0·033	+0·63
754	+ 9	2583	16512	450	−0·010	−0·21	0·000	−0·48
755	+49	2110	16537	.....	−0·070	+0·43	.....	
756	−11	3238	16549	.....	0·000	+0·42	.....	

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
757	+39	2496	16603	.....	−0·025	−0·02	.....	.....
758	+ 6	2559	16616	.....	−0·002	−0·42	.....	.....
759	+17	2446	16625	1313	−0·013	−0·04	+0·007	−0·19
760	− 1	2632	16642	.....	−0·021	−0·11	.....	.....
761	+26	2316	16659	.....	+0·002	+0·19	.....	.....
763	+11	2440	16693	.....	+0·009	+0·41	.....	.....
764	−16	3424	16740	457	−0·019	+0·26	−0·006	+0·13
765	+73	549	16744	.....	−0·013	+0·48	.....	.....
766	+24	2443	16752	.....	−0·043	−0·27	.....	.....
767	−15	3442	16762	.....	−0·017	+0·01	.....	.....
768	+88	71	16763	.....	+0·039	+0·17	.....	.....
769	+31	2350	16789	.....	−0·054	+0·22	.....	.....
770	+ 0	2920	16790	.....	+0·021	+0·25	.....	.....
771	+ 0	2926	16813	460	−0·042	−0·06	−0·028	−0·30
772	+58	1371	16843	.....	+0·031	+0·51	.....	.....
773	+52	1626	16906	.....	−0·027	+0·24	.....	.....
774	−27	8670	16936	1319	+0·016	+0·99	+0·003	+1·25
775	+64	896	16941	.....	0·000	−0·02	.....	.....
776	+18	2611	16976	.....	−0·092	+0·02	.....	.....
777	+42	2307	16978	.....	+0·009	−0·23	.....	.....
778	+26	2354	17012	.....	+0·005	−0·21	.....	.....
779	−15	3482	17029	465	−0·014	+0·12	+0·001	−0·14
780	−22	3383	17039	.....	−0·012	+0·66	.....	.....
781	− 3	3309	17050	.....	+0·027	−0·10	.....	.....
782	+ 8	2609	17063	.....	+0·002	+0·12	.....	.....
783	+11	2473	17103	.....	−0·016	+0·06	.....	.....
784	−12	3659	17113	1321	+0·026	−0·21	+0·036	−0·34
785	+38	2347	17116	.....	−0·016	+0·19	.....	.....
786	−22	3401	17133	471	−0·014	−0·27	−0·001	−0·45
787	+19	2584	17147	473	−0·027	−0·02	−0·012	−0·22
788	+46	1797	17171	.....	−0·007	+0·70	.....	.....
789	− 5	3535	17180	1324	−0·009	−0·08	+0·001	−0·27
790	+ 2	2560	17209	.....	−0·007	−0·48	.....	.....
791	−17	3668	17216	.....	−0·030	+0·62	.....	.....
792	+21	2439	17225	.....	−0·001	−0·19	.....	.....
793	− 7	3452	17227	475	−0·013	+0·11	−0·006	−0·05
794	+34	2344	17285	.....	−0·025	−0·08	.....	.....
795	− 2	3567	17319	.....	−0·019	+0·35	.....	.....
796	+81	402	17347	.....	−0·082	−0·50	.....	.....
797	−24	10540	17380	1329	+0·034	−1·00	+0·024	+0·94
798	−26	9340	17391	.....	−0·038	−0·62	.....	.....
799	+28	2153	17410	.....	−0·045	−0·27	.....	.....
800	+84	289	17443	.....	−0·061	−0·01	.....	.....
801	+17	2551	17464	1333	−0·014	−0·24	+0·012	−0·59
802	+13	2602	17502	.....	+0·030	+0·25	.....	.....
804	−17	3726	17506	1334	+0·020	−0·13	+0·038	−0·28
805	+56	1627	17518	483	−0·052	+0·36	−0·032	+0·11
806	+ 0	3002	17542	.....	+0·009	+0·64	.....	.....
807	+ 4	2669	17543	484	−0·029	−0·05	−0·015	−0·27
808	−14	3605	17548	.....	−0·013	−0·34	.....	.....

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	°				s	″	s	″
809	+39	2580	17557	485	−0·021	+0·13	−0·008	−0·06
810	+54	1556	17567	.....	−0·030	+0·09	.....	.....
811	+44	2234	17572	.....	−0·013	+0·53	.....	.....
812	− 6	3705	17599	.....	−0·037	−0·40	.....	.....
813	− 3	3384	17631	1336	−0·028	−0·38	−0·008	−0·57
814	+76	473	17637	.....	−0·009	+0·16	.....	.....
815	+32	2311	17652	.....	−0·028	+0·30	.....	.....
816	+57	1408	17664	.....	+0·013	+0·24	.....	.....
817	+11	2529	17687	488	−0·036	−0·33	−0·021	−0·57
818	+23	2530	17699	.....	−0·007	+0·68	.....	.....
819	−13	3651	17746	.....	−0·074	+0·24	.....	.....
820	+46	1847	17758	1338	−0·042	−0·09	−0·017	−0·18
821	+28	2185	17787	.....	−0·046	+0·37	.....	.....
822	+ 6	2697	17811	.....	+0·003	−0·13	.....	.....
823	−22	3515	17813	.....	−0·031	+0·73	.....	.....
824	+17	2595	17825	.....	+0·008	+0·05	.....	.....
825	− 4	3430	17828	490	−0·012	−0·21	−0·002	−0·45
826	+63	1056	17837	.....	−0·079	+0·31	.....	.....
827	−25	9653	17861	1341	+0·001	+1·21	−0·020	+1·26
828	+28	2193	17874	492	−0·025	−0·14	−0·016	−0·24
829	+81	416	17932	.....	−0·090	+0·01	.....	.....
830	+73	587	17934	.....	−0·123	+0·14	.....	.....
831	+20	2814	17970	.....	+0·012	+0·11	.....	.....
832	+10	2531	17975	.....	−0·021	−0·21	.....	.....
833	+ 6	2722	17995	1344	−0·005	−0·13	0·000	−0·42
834	− 7	3582	17996	.....	0·000	+0·07	.....	.....
835	+ 4	2721	18015	.....	−0·005	−0·41	.....	.....
836	+35	2435	18023	.....	−0·024	+0·81	.....	.....
837	+40	2647	18048	1346	−0·068	+0·02	−0·048	−0·14
838	−20	3818	18120	.....	−0·023	−0·30	.....	.....
839	+55	1598	18133	497	−0·069	+0·15	−0·037	−0·12
840	−10	3672	18144	498	−0·020	−0·06	−0·018	−0·23
841	+16	2508	18154	.....	−0·005	+0·50	.....	.....
842	− 0	2686	18163	.....	+0·028	−0·07	.....	.....
843	−11	3516	18168	1348	+0·025	+0·34	+0·038	+0·25
844	+53	1622	18213	.....	+0·046	−0·39	.....	.....
845	+31	2493	18214	1350	0·000	−0·04	−0·014	−0·10
846	+ 7	2655	18249	.....	−0·001	−0·43	.....	.....
847	+27	2262	18273	.....	−0·042	+0·12	.....	.....
848	− 9	3711	18309	.....	+0·004	+0·06	.....	.....
849	+ 0	3076	18351	501	−0·006	+0·10	+0·009	−0·08
850	+49	2227	18356	.....	−0·042	+0·24	.....	.....
851	+44	2285	18370	1353	−0·033	−0·21	−0·001	−0·50
852	+ 3	2799	18419	.....	−0·014	+0·14	.....	.....
853	+23	2591	18433	.....	−0·022	−0·27	.....	.....
854	+11	2589	18466	.....	+0·015	+0·34	.....	.....
855	−15	3715	18468	.....	+0·006	+0·44	.....	.....
856	−22	3645	18502	1354	+0·023	+0·68	+0·024	+0·38
857	+55	1625	18504	.....	+0·004	+0·05	.....	.....
858	+65	953	18527	.....	−0·052	+0·12	.....	.....

Cat. No.	B. D. or C. D. No.	G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°			s	″	s	″
859	+35 2474	18539	.....	−0·044	+0·07	.....	.....
860	− 4 3540	18562	.....	−0·025	+0·10	.....	.....
861	−11 3591	18604	.....	−0·003	+0·26	.....	.....
862	+83 397	18611	Nι	−0·114	−0·11	−0·151	+0·14
863	+26 2494	18623	1358	−0·033	0·00	−0·013	−0·11
864	+18 2782	18637	507	−0·013	−0·08	+0·002	−0·31
865	+50 2027	18643	509	−0·063	+0·19	−0·051	−0·01
866	+ 9 2814	18680	1359	+0·009	+0·47	−0·002	+0·24
867	+19 2719	18692	.....	−0·018	+0·29	.....	.....
868	+62 1318	18704	.....	−0·045	+0·39	.....	.....
869	+40 2701	18742	.....	−0·023	−0·04	.....	.....
870	+19 2725	18805	513	+0·002	+0·17	+0·014	−0·05
871	− 8 3667	18823	.....	+0·017	+0·17	.....	.....
872	+14 2680	18830	.....	−0·028	+0·22	.....	.....
873	+32 2411	18843	1360	−0·015	−0·05	+0·005	−0·28
874	+22 2650	18900	.....	−0·013	−0·46	.....	.....
875	− 2 3768	18919	1362	+0·012	+0·49	+0·027	+0·21
876	+ 2 2761	18945	516	−0·027	+0·05	−0·013	−0·22
877	−16 3785	18974	.....	−0·004	+0·17	.....	.....
878	−21 3824	18986	.....	−0·018	+0·71	.....	.....
879	+51 1889	18990	.....	+0·011	+0·55	.....	.....
880	+ 5 2836	18993	.....	+0·034	−0·45	.....	.....
881	−13 3863	18999	1365	−0·009	−0·14	+0·004	−0·29
882	+65 978	19019	521	−0·052	+0·27	+0·006	+0·18
883	−26 10095	19029	519	−0·012	+0·53	−0·005	+0·23
885	+39 2720	19048	1367	−0·021	−0·16	−0·011	−0·49
886	+50 2047	19095	.....	−0·015	−0·02	.....	.....
887	−26 10158	19163	.....	+0·019	+0·41	.....	.....
888	− 9 3878	19168	523	−0·006	−0·02	+0·006	−0·26
889	+70 778	19189	.....	−0·097	−0·48	.....	.....
890	+ 4 2841	19223	.....	−0·026	+0·25	.....	.....
891	+22 2678	19224	.....	−0·026	+0·31	.....	.....
892	+19 2777	19242	526	−0·024	+0·06	−0·010	−0·29
893	− 5 3843	19244	525	+0·014	−0·52	+0·023	−0·75
894	+57 1498	19267	.....	+0·004	+0·38	.....	.....
895	+46 1949	19273	527	−0·056	+0·35	−0·031	+0·03
896	− 6 3964	19289	.....	+0·008	+0·87	.....	.....
897	−18 3789	19295	1369	+0·009	+0·21	+0·026	−0·08
898	−12 4018	19311	1371	−0·007	+0·08	−0·003	−0·02
899	+13 2782	19319	1372	+0·014	−0·07	+0·025	−0·26
900	+42 2481	19322	.....	−0·042	+0·33	.....	.....
901	+31 2605	19345	.....	−0·002	−0·55	.....	.....
902	+ 8 2857	19417	.....	−0·013	+0·15	.....	.....
903	−24 11469	19435	1376	−0·007	+0·21	−0·010	+0·15
904	−12 4042	19446	.....	+0·016	−0·21	.....	.....
905	+52 1804	19467	531	−0·016	+0·13	+0·001	−0·12
906	− 1 2957	19504	533	−0·017	−0·08	−0·015	−0·34
907	+36 2495	19519	.....	−0·048	+0·68	.....	.....
908	+28 2332	19522	.....	−0·019	−0·03	.....	.....
909	+31 2628	19597	534	−0·030	−0·06	−0·010	−0·34

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	°				s	″	s	″
910	+38	2565	19607	535	−0·042	+0·05	−0·024	−0·13
911	+81	482	19630	.....	−0·057	−0·14	.....	.....
912	+66	855	19660	.....	−0·053	−0·34	.....	.....
913	+50	2095	19668	.....	0·000	+0·45	.....	.....
914	+23	2710	19687	.....	−0·012	+0·05	.....	.....
915	−11	3770	19695	1381	+0·017	+0·13	+0·004	+0·03
916	+ 2	2844	19704	.....	−0·032	+0·20	.....	.....
917	+54	1693	19742	.....	+0·041	+0·29	.....	.....
918	+12	1879	19793	1382	−0·025	−0·04	−0·007	−0·29
919	−18	3882	19806	.....	−0·042	+0·82	.....	.....
920	− 5	3936	19816	545	−0·013	+0·08	+0·002	−0·05
921	− 7	3897	19836	.....	+0·020	+0·44	.....	.....
922	+27	2417	19856	C3	−0·018	+0·31	−0·001	+0·10
923	+33	2489	19867	1384	−0·022	−0·11	−0·007	−0·15
924	−22	3844	19871	.....	+0·034	+0·56	.....	.....
925	+ 2	2862	19884	547	−0·033	+0·32	−0·024	−0·07
926	+15	2758	19885	.....	−0·006	+0·37	.....	.....
927	−25	10537	19904	1385	+0·015	+0·57	+0·024	−0·06
928	− 0	2886	19932	.....	+0·002	+0·02	.....	.....
929	+29	2581	19966	.....	−0·029	−0·31	.....	.....
930	−15	3966	19975	548	−0·007	+0·36	+0·004	+0·13
931	+37	2580	19982	.....	−0·046	+0·30	.....	.....
932	−30	11780	19999	.....	+0·007	−0·17	.....	.....
933	+74	595	20029	550	−0·029	+0·38	+0·038	+0·20
934	+ 6	2957	20039	1388	0·000	−0·21	+0·010	−0·67
935	+83	431	20087	Nκ	−0·030	−0·09	−0·083	−0·10
936	+87	143	20088	.....	−0·365	+0·02	.....	.....
937	+41	2539	20097	.....	−0·071	+0·11	.....	.....
938	+22	2764	20120	1392	−0·026	−0·37	−0·024	−0·66
939	+ 0	3277	20122	1393	−0·015	+0·01	+0·006	−0·32
940	+14	2812	20147	.....	+0·026	+0·79	.....	.....
941	− 7	3938	20195	1394	+0·005	+0·12	+0·010	−0·12
942	− 7	3943	20215	.....	+0·034	−0·29	.....	.....
943	+40	2840	20226	555	−0·022	+0·49	−0·004	+0·11
944	+72	664	20236	.....	−0·157	−0·18	.....	.....
945	−21	4030	20305	.....	+0·042	+0·10	.....	.....
946	+48	2262	20308	1395	−0·049	+0·48	−0·025	+0·05
947	−12	4198	20310	.....	−0·029	+0·18	.....	.....
948	+19	2924	20340	.....	−0·032	+0·74	.....	.....
949	+ 6	3001	20346	.....	−0·005	+0·58	.....	.....
950	+26	2656	20367	.....	−0·023	+0·04	.....	.....
951	+34	2604	20369	.....	−0·032	+0·15	.....	.....
952	+50	2146	20380	.....	−0·024	+0·22	.....	.....
953	+63	1167	20381	.....	−0·070	+0·49	.....	.....
954	− 4	3818	20384	.....	+0·012	+0·11	.....	.....
955	−25	10758	20389	.....	−0·027	+0·40	.....	.....
956	+43	2475	20492	.....	−0·064	−0·52	.....	.....
957	− 8	3935	20539	564	−0·006	−0·08	+0·006	−0·32
958	+37	2625	20543	.....	−0·042	+0·66	.....	.....
959	+69	789	20544	.....	−0·155	+0·84	.....	.....

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	°				s	″	s	″
960	+21	2755	20575	1400	−0·004	+0·37	+0·008	+0·14
961	+16	2823	20579	1401	+0·023	+0·47	+0·041	+0·15
962	−15	4083	20628	.....	−0·004	−0·03	.....	.....
963	+ 1	3067	20637	.....	+0·031	+0·07	.....	.....
964	− 6	4148	20638	.....	+0·006	0·00	.....	.....
965	−26	10842	20678	1404	+0·021	+1·18	+0·007	+1·06
966	+72	679	20692	569	+0·024	+0·25	+0·077	+0·04
967	−11	3940	20695	.....	+0·007	+0·01	.....	.....
968	− 0	2961	20697	1406	+0·001	−0·30	+0·014	−0·60
969	+25	2916	20786	.....	+0·009	+0·35	.....	.....
970	+55	1756	20833	.....	−0·016	+1·00	.....	.....
971	−20	4246	20834	.....	−0·010	−0·17	.....	.....
972	+31	2742	20848	.....	+0·010	−0·11	.....	.....
973	+ 9	3055	20850	1408	−0·026	+0·12	−0·005	−0·31
974	+27	2512	20947	578	−0·036	+0·66	−0·021	+0·27
975	−14	4237	20949	577	−0·007	+0·35	+0·009	+0·10
976	+81	517	20951	.....	−0·024	+0·43	.....	.....
977	+77	592	20952	.....	+0·046	+0·52	.....	.....
978	+11	2826	20968	.....	+0·140	+0·47	.....	.....
979	−18	4118	21031	.....	−0·009	+0·21	.....	.....
981	+47	2253	21044	1412	−0·038	−0·23	−0·019	−0·19
982	+35	2711	21048	.....	−0·034	+0·04	.....	.....
983	+37	2665	21064	.....	−0·016	−0·05	.....	.....
984	− 5	4143	21095	.....	+0·021	−0·14	.....	.....
985	−14	4266	21129	.....	+0·022	+0·50	.....	.....
986	+52	1898	21154	.....	+0·001	+0·87	.....	.....
987	+ 2	2989	21155	.....	+0·056	−0·41	.....	.....
988	+ 6	3088	21158	582	−0·001	+0·25	+0·004	−0·16
989	+17	2906	21164	.....	+0·002	+0·53	.....	.....
990	+15	2911	21194	583	−0·019	+0·15	−0·012	−0·25
991	+ 7	3023	21201	.....	+0·027	−0·32	.....	.....
992	−23	12525	21235	.....	+0·004	+0·44	.....	.....
993	+78	527	21243	590	−0·125	+0·30	−0·044	+0·28
994	− 3	3829	21251	.....	+0·022	+0·13	.....	.....
995	+28	2477	21257	.....	−0·005	+0·30	.....	.....
996	− 2	4052	21269	585	−0·020	+0·04	−0·013	−0·09
997	+ 4	3069	21288	588	+0·040	+0·20	+0·044	−0·22
998	+83	453	21295	Nλ	−0·251	+0·14	−0·159	+0·03
999	+20	3166	21368	.....	+0·007	+0·12	.....	.....
1000	+16	2849	21408	591	−0·031	+0·35	−0·022	+0·06
1001	+14	2969	21428	.....	−0·001	+0·41	.....	.....
1002	−25	11228	21447	592	−0·012	+0·55	−0·005	+0·16
1003	− 5	4210	21487	.....	−0·005	+0·14	.....	.....
1004	−22	4068	21489	594	−0·012	+0·94	−0·011	+0·70
1005	+31	2805	21519	.....	−0·024	+0·11	.....	.....
1006	−25	11295	21556	.....	−0·035	+0·23	.....	.....
1007	+37	2708	21590	.....	−0·032	+0·43	.....	.....
1008	+59	1697	21604	.....	−0·043	+0·13	.....	.....
1009	−19	4307	21609	597	−0·021	+0·25	−0·016	−0·01
1010	−12	4425	21667	.....	+0·004	+0·45	.....	.....

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	°			s	″	s	″
1011	−23 12731	21694	.....	−0·034	+0·37	.....	.....
1012	+17 2964	21696	1421	0·000	+0·37	+0·003	+0·05
1013	+45 2374	21715	.....	−0·002	+0·55	.....	.....
1014	+ 6 3169	21724	1422	−0·029	−0·03	−0·015	−0·99
1015	+41 2673	21743	.....	−0·091	−0·27	.....	.....
1016	+27 2595	21751	.....	−0·028	−0·23	.....	.....
1017	− 1 3149	21826	.....	−0·008	+0·74	.....	.....
1018	− 3 3903	21838	603	−0·018	+0·11	−0·008	−0·15
1019	+11 2947	21858	.....	+0·015	+0·42	.....	.....
1020	− 7 4242	21864	.....	−0·012	+0·68	.....	.....
1021	+75 586	21880	.....	−0·091	+0·13	.....	.....
1022	+23 2916	21887	1425	−0·013	+0·13	0·000	−0·18
1023	+53 1856	21897	.....	−0·019	+0·67	.....	.....
1024	− 4 4086	21920	605	+0·012	+0·11	+0·019	−0·23
1025	+32 2702	21924	.....	−0·018	+1·00	.....	.....
1026	−18 4260	21950	.....	+0·017	−0·73	.....	.....
1027	−25 11485	21982	607	+0·030	+0·48	+0·034	+0·20
1028	+46 2169	21987	608	−0·071	+0·53	−0·061	+0·22
1029	+ 1 3215	22007	1427	+0·026	−0·15	+0·027	−0·31
1030	+19 3086	22012	609	−0·025	+0·10	−0·006	−0·15
1031	− 2 4179	22064	.....	+0·005	+0·26	.....	.....
1032	+61 1591	22101	.....	−0·074	+0·74	.....	.....
1033	−26 11359	22157	616	−0·041	+0·63	−0·044	+0·22
1034	+29 2834	22165	.....	−0·009	+0·23	.....	.....
1035	−14 4433	22171	1430	−0·018	+0·37	−0·016	+0·08
1036	−24 12695	22179	.....	+0·012	+0·42	.....	.....
1037	+ 6 3236	22183	.....	0·000	+0·15	.....	.....
1038	+21 2934	22193	618	−0·004	+0·14	+0·002	−0·15
1039	+35 2828	22224	.....	−0·063	+0·42	.....	.....
1040	+61 1598	22281	1432	−0·025	+0·86	+0·009	+0·62
1041	−27 11015	22303	620	+0·030	+0·63	+0·034	+0·38
1042	+17 3053	22314	.....	−0·004	+0·20	.....	.....
1043	−10 4350	22332	622	−0·020	+0·10	−0·010	−0·17
1044	+80 519	22337	.....	−0·068	−0·28	.....	.....
1045	+46 2194	22344	.....	−0·061	+0·04	.....	.....
1046	+23 2965	22345	.....	+0·013	+0·33	.....	.....
1047	− 6 4467	22360	.....	−0·062	−0·01	.....	.....
1048	+13 3177	22361	.....	−0·025	+0·17	.....	.....
1050	+56 1907	22398	.....	−0·014	+0·36	.....	.....
1051	+39 3029	22502	626	−0·021	+0·17	−0·008	−0·28
1052	−28 12358	22520	.....	+0·024	+0·92	.....	.....
1053	+34 2830	22522	.....	−0·011	+0·54	.....	.....
1054	+ 8 3271	22560	.....	+0·018	+0·11	.....	.....
1055	+ 2 3175	22592	1436	+0·019	+0·47	+0·038	+0·17
1056	− 4 4165	22622	.....	−0·017	+0·71	.....	.....
1057	−21 4422	22629	1437	+0·003	+1·06	+0·016	+0·89
1058	+53 1897	22672	.....	−0·027	+0·82	.....	.....
1059	+30 2884	22682	.....	−0·042	+0·25	.....	.....
1061	+18 3261	22732	.....	+0·037	+0·66	.....	.....
1062	+82 498	22749	Ng	−0·093	+0·17	+0·003	−0·04

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	°			s	″	s	″
1063	− 5 4374	22783	.....	−0·015	−0·05	.....	.....
1064	+75 608	22843	.....	−0·038	+0·94	.....	.....
1065	+14 3155	22861	.....	−0·001	+0·32	.....	.....
1066	+ 9 3298	22862	633	−0·003	+0·32	+0·009	−0·01
1067	+24 3095	22870	.....	−0·025	+0·37	.....	.....
1068	+65 1157	22871	.....	−0·003	+0·56	.....	.....
1069	+31 2947	22935	634	−0·028	+0·24	−0·015	−0·19
1070	−18 4381	22951	.....	+0·030	+0·48	.....	.....
1071	+19 3220	23046	.....	+0·011	+0·37	.....	.....
1072	−21 4512	23065	.....	+0·015	+0·24	.....	.....
1073	+49 2583	23071	.....	−0·022	+0·51	.....	.....
1074	+44 2652	23073	1448	−0·040	−0·03	−0·030	−0·32
1075	−26 11896	23081	1447	+0·047	+1·55	+0·052	+1·34
1076	− 0 3230	23120	.....	+0·006	+0·26	.....	.....
1077	+31 2967	23127	.....	−0·046	+0·06	.....	.....
1078	+28 2667	23135	.....	+0·005	+0·39	.....	.....
1079	−10 4445	23145	1450	−0·059	+0·03	−0·038	−0·22
1080	−15 4467	23158	637	−0·023	+0·38	−0·018	+0·14
1081	−14 4565	23194	.....	−0·011	+0·98	.....	.....
1082	+ 8 3367	23199	1451	+0·001	+0·49	+0·006	+0·16
1083	+21 3070	23248	.....	−0·033	+0·29	.....	.....
1084	+63 1336	23266	.....	−0·039	+0·22	.....	.....
1085	+14 3207	23277	640	−0·018	+0·37	−0·006	+0·05
1086	− 9 4525	23293	.....	−0·008	+0·31	.....	.....
1087	+ 1 3408	23317	1453	−0·014	+0·46	+0·006	+0·24
1088	+39 3098	23352	.....	−0·043	−0·04	.....	.....
1089	+11 3156	23382	.....	−0·003	+0·04	.....	.....
1090	−17 4773	23396	.....	+0·038	+0·36	.....	.....
1091	+71 835	23397	.....	−0·007	+0·47	.....	.....
1092	−24 13292	23451	644	−0·029	−0·16	−0·024	−0·38
1093	−21 4597	23533	.....	−0·007	+1·20	.....	.....
1094	+50 2400	23591	.....	−0·044	+0·68	.....	.....
1095	− 1 3329	23598	1458	−0·002	+0·14	−0·019	−0·02
1096	+80 544	23599	.....	−0·037	+0·13	.....	.....
1097	+16 3183	23603	.....	+0·027	−0·01	.....	.....
1098	+ 7 3368	23614	.....	−0·025	+0·35	.....	.....
1099	+27 2809	23619	.....	−0·001	+0·87	.....	.....
1100	+ 4 3422	23621	1459	+0·013	+0·11	+0·013	−0·14
1101	+58 1731	23654	.....	−0·042	+0·24	.....	.....
1102	+52 2065	23741	653	−0·051	+0·49	−0·027	+0·14
1103	− 5 4461	23788	.....	+0·019	+0·12	.....	.....
1104	−11 4411	23816	1461	−0·001	+0·15	+0·008	−0·02
1105	+12 3252	23837	656	−0·021	+0·12	−0·012	−0·23
1106	+41 2856	23845	.....	−0·035	+0·13	.....	.....
1107	+12 3256	23853	.....	+0·006	+0·23	.....	.....
1108	+30 3033	23879	.....	−0·043	+0·54	.....	.....
1109	−15 4622	23882	.....	+0·025	+0·56	.....	.....
1110	+48 2542	23894	.....	+0·023	+0·58	.....	.....
1111	+24 3218	23901	.....	−0·035	+0·31	.....	.....
1112	+36 3912	23921	.....	−0·087	+0·02	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
1113	+ 3	3465	23929	.....	+0·019	+0·19	.....	.....
1114	+46	2349	23965	663	−0·049	+0·17	−0·035	−0·10
1115	+ 4	3489	24048	665	+0·005	+0·50	+0·008	+0·14
1116	+27	2888	24138	667	+0·018	−0·49	+0·027	−0·72
1117	−22	4423	24147	.....	−0·035	+1·44	.....	.....
1118	−14	4770	24148	.....	−0·019	+0·43	.....	.....
1119	+17	3334	24150	.....	−0·026	+0·15	.....	.....
1120	+ 2	3403	24162	668	+0·013	+0·39	+0·012	+0·05
1121	+80	555	24180	.....	−0·006	+0·24	.....	.....
1122	+25	3353	24199	.....	−0·016	+0·30	.....	.....
1123	+ 9	3485	24219	1466	−0·023	+0·53	+0·011	+0·21
1124	+86	269	24236	Nh	−0·318	+0·27	−0·149	+0·04
1125	− 1	3412	24271	.....	+0·029	+0·50	.....	.....
1126	− 7	4523	24356	1467	+0·008	+0·31	+0·007	+0·07
1127	+22	3237	24392	.....	−0·026	+0·16	.....	.....
1128	+55	1995	24410	.....	−0·031	+0·77	.....	.....
1129	+51	2282	24432	676	−0·049	+0·51	−0·029	+0·27
1130	+33	2995	24437	.....	−0·027	+0·09	.....	.....
1131	+62	1586	24455	.....	−0·052	+0·56	.....	.....
1132	+14	3374	24461	.....	−0·038	+0·42	.....	.....
1133	− 9	4632	24468	673	+0·018	+0·27	+0·021	+0·15
1134	+52	2119	24489	.....	−0·014	+0·63	.....	.....
1135	+ 4	3570	24500	.....	−0·007	+0·40	.....	.....
1136	+ 2	3458	24509	677	+0·047	+0·04	+0·060	−0·07
1137	−17	4987	24517	1470	−0·018	+0·34	−0·003	+0·24
1138	+44	2812	24581	.....	−0·043	−0·17	.....	.....
1139	+39	3310	24628	.....	−0·008	+0·60	.....	.....
1140	−30	15215	24632	679	−0·027	+1·58	−0·011	+1·25
1141	+79	571	24669	.....	−0·010	+0·40	.....	.....
1142	−21	4855	24678	.....	+0·009	+0·65	.....	.....
1143	+ 9	3564	24695	680	−0·023	+0·16	−0·012	−0·11
1144	+15	3365	24699	.....	−0·006	+0·34	.....	.....
1145	+26	3178	24720	.....	−0·006	+0·76	.....	.....
1146	+49	2732	24722	.....	−0·058	+0·56	.....	.....
1147	− 2	4558	24726	.....	+0·030	+0·34	.....	.....
1148	−13	4863	24750	1472	+0·012	+0·38	+0·023	+0·11
1149	+ 6	3639	24759	.....	−0·005	+0·02	.....	.....
1150	−21	4908	24856	682	+0·020	+0·44	+0·025	+0·32
1151	+30	3162	24933	.....	−0·019	−0·08	.....	.....
1152	−17	5112	24946	.....	−0·004	+0·31	.....	.....
1153	− 9	4678	24952	1475	+0·015	+0·19	+0·025	−0·01
1154	+13	3593	24977	.....	−0·010	+0·71	.....	.....
1155	+24	3381	25003	.....	−0·002	+0·04	.....	.....
1156	−29	14834	25024	687	−0·007	+1·19	−0·006	+0·94
1157	+ 3	3680	25036	1476	+0·010	−0·02	+0·024	−0·22
1158	− 2	4599	25046	688	−0·006	+0·03	+0·003	−0·15
1159	+21	3411	25116	690	−0·006	+0·24	−0·003	−0·23
1160	−20	5134	25132	.....	+0·014	−0·03	.....	.....
1161	+ 7	3682	25153	1478	−0·021	+0·25	+0·007	+0·11
1162	+29	3259	25165	1479	+0·023	−0·23	+0·052	−0·40

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	°				s	″	s	″
1163	−25	13149	25180	692	−0·027	+0·18	−0·025	−0·09
1164	−26	13192	25184	.....	−0·021	+0·79	.....	.....
1165	−14	5071	25220	696	−0·003	+0·17	−0·006	+0·11
1166	−10	4713	25282	.....	+0·035	−0·02	.....	.....
1167	+16	3529	25284	1481	−0·019	+0·18	−0·008	−0·13
1168	+41	3075	25301	.....	−0·035	−0·20	.....	.....
1169	+83	536	25334	Nμ	−0·206	+0·19	−0·063	+0·17
1170	+52	2232	25343	.....	−0·014	+0·46	.....	.....
1171	+38	3213	25352	.....	−0·068	−0·14	.....	.....
1172	+56	2113	25362	.....	+0·046	−0·49	.....	.....
1173	+20	3847	25371	.....	−0·016	−0·07	.....	.....
1174	+46	2508	25379	1483	−0·017	+0·41	−0·012	+0·23
1175	+10	3573	25381	.....	−0·022	+0·12	.....	.....
1176	+67	1079	25383	.....	−0·088	+0·36	.....	.....
1177	− 8	4638	25385	1482	0·000	+0·24	+0·010	+0·06
1178	+ 0	3975	25437	.....	+0·027	+0·16	.....	.....
1179	−17	5271	25452	.....	+0·021	−0·13	.....	.....
1180	+38	3238	25466	699	−0·058	−0·08	−0·046	−0·17
1181	+62	1637	25519	.....	−0·045	+0·64	.....	.....
1182	− 9	4796	25580	1486	−0·012	+0·39	−0·003	+0·17
1183	+31	3332	25583	.....	−0·034	+0·19	.....	.....
1184	−25	13394	25636	.....	−0·003	+0·96	.....	.....
1185	−27	13170	25661	1487	−0·013	+0·19	−0·006	−0·03
1186	−22	4854	25687	.....	+0·011	+0·52	.....	.....
1187	+18	3817	25729	.....	−0·044	−0·04	.....	.....
1188	− 4	4582	25730	1489	+0·017	−0·05	+0·022	−0·27
1189	−13	5119	25827	.....	+0·014	+0·28	.....	.....
1190	+26	3368	25838	.....	−0·042	−0·44	.....	.....
1191	+ 7	3862	25840	.....	+0·034	−0·06	.....	.....
1192	+33	3223	25847	705	−0·039	+0·11	+0·018	−0·23
1193	− 3	4390	25855	.....	+0·040	−0·23	.....	.....
1194	− 3	4392	25862	.....	−0·014	+0·39	.....	.....
1195	+21	3582	25895	.....	−0·030	−0·11	.....	.....
1196	+36	3307	25934	.....	−0·035	0·00	.....	.....
1197	−26	13595	25941	706	−0·012	+0·10	−0·013	−0·06
1198	−16	5078	25955	1495	+0·042	−0·05	+0·056	−0·08
1199	+ 4	3916	25991	709	+0·004	−0·17	+0·007	−0·62
1200	− 6	4976	26013	.....	−0·021	−0·03	.....	.....
1201	+ 2	3738	26020	.....	+0·025	−0·10	.....	.....
1202	+13	3838	26064	.....	+0·018	+0·09	.....	.....
1203	−32	3286	26086	713	−0·037	−0·36	−0·028	−0·52
1204	+40	3544	26087	.....	−0·031	−0·20	.....	.....
1205	+14	3736	26091	712	−0·002	−0·05	0·000	−0·20
1206	+82	572	26155	.....	−0·037	+0·42	.....	.....
1207	−30	16575	26161	715	−0·045	+1·42	−0·042	+1·27
1208	+19	3888	26198	.....	+0·005	+0·03	.....	.....
1209	−23	15008	26210	.....	−0·002	−0·33	.....	.....
1210	+45	2825	26268	.....	−0·128	−0·22	.....	.....
1211	+13	3899	26270	716	−0·017	+0·18	−0·008	−0·17
1212	− 5	4876	26285	717	+0·001	−0·09	+0·001	−0·25

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	°				s	″	s	″
1213	− 1	3649	26300	1497	−0·025	+0·01	−0·029	−0·28
1214	+28	3193	26317	1498	−0·014	+0·06	−0·012	−0·12
1215	+ 5	4040	26379	.....	+0·011	−0·14	.....	.....
1216	−21	5275	26386	720	−0·024	+0·15	−0·028	+0·04
1217	−12	5311	26469	.....	−0·008	−0·40	.....	.....
1218	+56	2209	26475	.....	−0·052	+0·51	.....	.....
1219	−25	13866	26516	.....	−0·025	+0·36	.....	.....
1220	+67	1129	26520	723	−0·062	+0·62	−0·038	+0·39
1221	+20	4088	26542	.....	−0·023	−0·04	.....	.....
1222	−19	5379	26589	722	−0·015	+0·56	−0·016	+0·37
1223	+11	3790	26609	725	+0·008	+0·19	+0·023	−0·18
1224	+53	2216	26621	726	−0·003	+0·29	+0·013	+0·14
1225	+37	3413	26650	.....	−0·048	+0·35	.....	.....
1226	− 5	4936	26669	.....	0·000	−0·10	.....	.....
1227	+65	1345	26735	.....	−0·098	+0·53	.....	.....
1228	+83	552	26773	.....	−0·140	+0·97	.....	.....
1229	+29	3584	26785	.....	−0·037	+0·12	.....	.....
1230	−14	5428	26805	.....	−0·080	+0·79	.....	.....
1231	+ 2	3879	26816	730	+0·008	−0·07	+0·020	−0·37
1232	−22	5105	26823	.....	−0·024	+0·03	.....	.....
1233	+76	734	26826	.....	−0·171	+0·36	.....	.....
1234	+19	4017	26844	1505	+0·007	−0·15	+0·026	−0·36
1235	+44	3133	26847	1506	−0·042	−0·19	−0·019	−0·32
1236	+62	1716	26888	.....	+0·020	+0·76	.....	.....
1237	− 0	3760	26907	.....	+0·013	−0·18	.....	.....
1238	−27	14004	26911	.....	−0·054	−0·16	.....	.....
1239	+33	3480	26946	.....	−0·035	+0·04	.....	.....
1240	+51	2605	26947	733	−0·059	+0·13	−0·050	−0·11
1241	+27	3410	26953	732	+0·001	+0·25	+0·007	+0·04
1242	+ 5	4177	26965	.....	−0·018	+0·38	.....	.....
1243	+70	1073	27023	.....	−0·065	−0·53	.....	.....
1244	+47	2870	27078	.....	−0·035	−0·25	.....	.....
1245	−25	14184	27089	736	−0·009	+0·75	−0·005	+0·55
1246	−18	5432	27105	.....	−0·008	+0·03	.....	.....
1247	− 7	5006	27107	737	−0·004	+0·14	−0·006	−0·03
1248	+21	3849	27134	.....	−0·019	+0·19	.....	.....
1249	+49	3062	27141	738	+0·019	+0·68	+0·016	+0·47
1250	+ 3	4097	27176	.....	+0·030	+0·13	.....	.....
1251	+54	2193	27206	.....	−0·024	−0·08	.....	.....
1252	+11	3954	27263	.....	+0·002	−0·03	.....	.....
1253	+44	3234	27347	742	−0·031	+0·22	−0·074	−0·11
1254	+10	4043	27354	741	−0·010	+0·02	−0·010	−0·27
1255	+18	4240	27391	743	−0·017	0·00	−0·005	−0·18
1256	+25	3972	27402	.....	−0·030	+0·51	.....	.....
1257	−29	16546	27412	.....	+0·029	+1·25	.....	.....
1258	+ 7	4252	27458	.....	−0·020	+0·21	.....	.....
1259	+ 8	4236	27470	745	−0·003	+0·13	+0·001	−0·20
1260	− 3	4742	27532	1519	+0·031	+0·43	+0·001	+0·26
1261	−24	15668	27542	.....	+0·039	+0·11	.....	.....
1262	+34	3778	27561	.....	−0·047	+0·34	.....	.....

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	°			s	″	s	″
1263	− 8 5154	27562	.....	+0·017	−0·24	.....	
1264	+40 3931	27564	.....	−0·016	+0·05	.....	
1265	+ 6 4357	27587	749	+0·006	−0·08	+0·006	−0·42
1266	+58 2013	27635	.....	−0·011	+0·61	.....	
1267	+19 4229	27672	752	−0·008	−0·12	0·000	−0·39
1268	+10 4126	27680	.....	−0·009	+0·34	.....	
1269	+ 0 4375	27681	.....	+0·013	+0·48	.....	
1270	+22 3873	27688	.....	−0·017	+0·27	.....	
1271	−28 16355	27763	753	+0·029	+0·90	+0·033	+0·70
1272	−29 3872	27820	.....	+0·006	−0·07	.....	
1273	−21 5609	27840	.....	−0·035	−0·01	.....	
1274	−27 14515	27842	.....	+0·040	+0·17	.....	
1275	+19 4277	27868	.....	+0·002	−0·08	.....	
1276	+47 3004	27869	.....	−0·019	−0·15	.....	
1277	− 4 5013	27880	.....	0·000	−0·13	.....	
1278	+35 3959	27904	.....	−0·014	−0·22	.....	
1279	+61 1970	27911	.....	−0·073	−0·14	.....	
1280	+ 8 4344	27929	.....	+0·033	+0·71	.....	
1281	+84 451	27964	Nν	−0·076	+0·25	+0·036	+0·10
1282	− 1 3911	28010	756	+0·005	+0·15	+0·007	+0·03
1283	−13 5608	28035	.....	−0·016	−0·20	.....	
1284	+67 1235	28070	.....	−0·049	0·00	.....	
1285	+51 2796	28077	.....	−0·041	−0·09	.....	
1286	+ 4 4395	28148	.....	+0·027	−0·14	.....	
1287	−12 5685	28200	761	−0·006	−0·06	−0·008	−0·14
1288	−19 5776	28233	.....	+0·006	−0·36	.....	
1289	+34 3967	28242	.....	−0·055	+0·10	.....	
1290	− 6 5451	28278	.....	−0·032	−0·03	.....	
1291	+14 4263	28288	.....	+0·012	−0·17	.....	
1292	−15 5629	28295	762	−0·020	−0·08	−0·023	−0·13
1294	+39 4159	28338	765	−0·068	−0·08	−0·064	−0·24
1295	+42 3721	28364	.....	−0·022	−0·17	.....	
1296	−29 17049	28394	1532	+0·007	+0·14	+0·017	−0·38
1297	+16 4259	28435	.....	−0·005	+0·19	.....	
1298	−18 5685	28442	.....	+0·010	−0·47	.....	
1299	−26 15036	28451	.....	+0·018	+0·10	.....	
1300	+56 2421	28456	.....	−0·036	−0·27	.....	
1301	+ 7 4477	28466	.....	0·000	−0·22	.....	
1302	−22 5442	28496	.....	−0·011	+0·19	.....	
1303	−10 5423	28563	1536	+0·012	+0·08	+0·019	−0·06
1304	+48 3154	28569	.....	−0·040	−0·08	.....	
1305	+72 957	28583	1538	−0·058	−0·20	−0·028	−0·48
1306	+10 4321	28593	768	+0·003	−0·02	+0·006	−0·28
1307	+ 4 4486	28614	1537	−0·002	+0·10	−0·012	−0·04
1308	+83 588	28690	.....	−0·247	+0·05	.....	
1309	+14 4369	28709	771	−0·024	−0·41	−0·028	−0·60
1310	+20 4658	28740	1539	+0·024	−0·50	+0·019	−0·59
1311	+23 4084	28741	.....	−0·007	−0·11	.....	
1312	+12 4411	28743	.....	+0·028	+0·46	.....	
1313	− 5 5335	28747	.....	+0·025	+0·12	.....	

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	°				s	″	s	″
1314	+15	4222	28780	774	−0·045	−0·27	−0·044	−0·48
1315	+78	716	28803	.....	+0·057	−0·54	.....	.....
1316	+31	4181	28827	.....	−0·039	+0·29	.....	.....
1317	+44	3541	28846	777	−0·048	+0·14	−0·060	−0·03
1318	+19	4501	28917	.....	−0·024	−0·21	.....	.....
1319	−25	15018	28929	779	+0·038	−0·02	+0·025	−0·22
1320	+33	4018	28959	780	−0·029	−0·15	−0·016	−0·46
1321	+52	2799	28975	1544	−0·060	+0·55	−0·034	+0·38
1322	−10	5506	28978	781	+0·022	+0·26	+0·014	+0·10
1323	+ 5	4613	28986	.....	+0·004	−0·20	.....	.....
1324	+27	3868	29001	.....	+0·014	+0·25	.....	.....
1325	−26	15282	29018	.....	−0·008	+0·60	.....	.....
1326	+81	718	29019	Nk	−0·148	−0·12	−0·038	−0·25
1327	− 1	4057	29025	1545	+0·043	−0·02	+0·033	−0·10
1328	−13	5773	29057	.....	+0·013	−0·03	.....	.....
1329	−21	5844	29060	.....	−0·028	−0·48	.....	.....
1330	+43	3739	29066	.....	−0·038	−0·36	.....	.....
1331	+63	1663	29069	.....	−0·026	+0·53	.....	.....
1332	− 9	5598	29109	1547	−0·011	−0·18	−0·015	−0·35
1333	+36	4314	29190	.....	−0·047	+0·55	.....	.....
1334	+13	4572	29201	.....	+0·001	+0·33	.....	.....
1335	−16	5741	29245	1548	+0·006	+0·41	+0·006	+0·40
1336	+40	4364	29251	788	+0·003	−0·07	+0·003	−0·46
1337	+ 3	4466	29252	.....	+0·016	−0·12	.....	.....
1338	+21	4424	29267	1549	−0·009	−0·57	−0·015	−0·66
1339	+45	3364	29354	.....	−0·043	−0·50	.....	.....
1340	+56	2523	29386	.....	+0·054	+0·02	.....	.....
1341	+67	1283	29401	.....	+0·021	+0·31	.....	.....
1342	− 0	4161	29480	1533	+0·046	+0·12	+0·028	−0·49
1343	+26	4073	29491	.....	+0·036	−0·03	.....	.....
1344	+30	4318	29502	.....	−0·018	−0·19	.....	.....
1345	+15	4340	29530	.....	+0·019	+0·02	.....	.....
1346	−21	5933	29543	.....	+0·032	−0·41	.....	.....
1347	+ 6	4754	29548	.....	+0·028	+0·72	.....	.....
1348	−11	5538	29571	794	0·000	−0·02	0·000	−0·10
1349	+86	319	29620	.....	−0·335	−0·24	.....	.....
1350	+29	4348	29661	797	−0·026	−0·09	−0·020	−0·25
1351	− 6	5720	29714	.....	+0·011	−0·12	.....	.....
1352	+ 4	4635	29735	800	+0·007	+0·09	+0·001	−0·16
1353	+24	4357	29744	.....	−0·038	−0·21	.....	.....
1354	−18	5903	29781	.....	+0·024	+0·52	.....	.....
1355	+10	4516	29821	.....	−0·023	+0·21	.....	.....
1356	+43	3877	29823	.....	+0·008	+0·03	.....	.....
1357	+37	4271	29847	.....	−0·043	+0·25	.....	.....
1358	+61	2111	29848	803	−0·042	−0·15	−0·027	−0·25
1359	+52	2913	29868	1560	−0·021	+0·29	−0·014	+0·06
1360	+ 3	4551	29904	.....	−0·021	−0·39	.....	.....
1361	+19	4691	29914	804	−0·005	−0·16	−0·006	−0·27
1362	−13	5923	29957	1562	+0·031	+0·69	+0·022	+0·70
1363	− 4	5446	29993	.....	+0·036	+0·05	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
1364	+18	4794	30023	.....	+0·010	+0·16	.....	.....
1365	+ 7	4696	30060	1564	+0·015	−0·02	−0·008	0·00
1366	−19	6107	30095	.....	+0·031	+0·54	.....	.....
1367	+69	1173	30118	809	−0·051	+0·23	−0·039	0·00
1368	+34	4436	30117	.....	+0·014	+0·79	.....	.....
1369	− 6	5770	30137	808	+0·005	−0·04	−0·004	−0·19
1370	−25	15479	30153	.....	−0·003	+0·46	.....	.....
1371	+22	4431	30211	.....	+0·002	−0·34	.....	.....
1372	+49	3562	30253	.....	−0·024	+0·09	.....	.....
1373	+11	4613	30259	.....	+0·046	+0·25	.....	.....
1374	− 8	5701	30268	1569	+0·006	+0·09	−0·002	−0·03
1375	+61	2169	30302	.....	−0·048	+0·28	.....	.....
1376	−17	6340	30320	812	−0·005	0·00	−0·018	−0·06
1377	+59	2409	30363	.....	−0·034	+0·23	.....	.....
1378	+ 0	4770	30377	.....	+0·009	−0·33	.....	.....
1379	+45	3637	30390	.....	−0·056	−0·53	.....	.....
1380	+ 6	4889	30414	.....	−0·037	−0·10	.....	.....
1381	+ 9	4891	30431	815	+0·011	−0·18	+0·005	−0·36
1382	+35	4626	30475	1571	−0·056	−0·04	−0·051	−0·41
1383	− 2	5631	30482	.....	+0·022	−0·05	.....	.....
1384	−16	5943	30491	819	−0·016	+0·17	−0·023	+0·10
1385	+16	4598	30502	.....	+0·033	−0·48	.....	.....
1386	−27	15639	30552	.....	+0·014	+1·64	.....	.....
1387	+40	4648	30566	.....	−0·018	+0·02	.....	.....
1388	−23	17135	30585	1576	+0·035	−0·22	+0·011	−0·29
1389	−14	6149	30631	1577	−0·010	+0·16	−0·018	+0·02
1390	+54	2638	30634	.....	−0·010	−0·11	.....	.....
1391	+31	4577	30677	.....	+0·002	−0·99	.....	.....
1392	+78	768	30681	.....	−0·063	−0·54	.....	.....
1393	+20	5046	30710	1579	+0·025	−0·19	+0·024	−0·28
1394	+11	4696	30719	.....	+0·001	−0·10	.....	.....
1395	+65	1691	30745	.....	−0·085	−0·16	.....	.....
1396	+ 3	4644	30747	.....	+0·059	+0·25	.....	.....
1397	− 5	5674	30755	1580	−0·005	+0·09	−0·002	−0·06
1398	−18	6056	30816	.....	+0·023	−0·08	.....	.....
1399	+ 9	4975	30868	.....	+0·014	+0·06	.....	.....
1400	− 1	4242	30872	.....	+0·001	−0·46	.....	.....
1401	− 1	4246	30896	827	−0·009	−0·23	−0·016	−0·36
1402	+28	4284	30899	.....	−0·007	−0·21	.....	.....
1403	−22	5833	30927	.....	+0·014	+0·15	.....	.....
1404	+17	4693	30945	.....	−0·034	−0·13	.....	.....
1405	+45	3813	30985	.....	−0·114	+0·45	.....	.....
1406	+ 5	4961	31013	834	+0·006	−0·31	+0·007	−0·70
1407	−12	6196	31021	.....	+0·003	+0·05	.....	.....
1408	+57	2475	31044	836	+0·004	+0·49	+0·014	+0·33
1409	−26	16033	31075	.....	+0·005	+0·83	.....	.....
1410	−16	6046	31109	1582	−0·031	−0·30	+0·15	0·37
1411	+ 3	4687	31117	.....	+0·003	+0·50	.....	.....
1412	+21	4719	31120	.....	−0·005	−0·38	.....	.....
1413	+42	4333	31127	.....	−0·028	−0·90	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
1414	− 8	5845	31152	840	+0·037	−0·12	+0·026	−0·14
1415	− 6	5960	31163	.....	+0·004	−0·02	.....	.....
1416	+12	4797	31171	.....	+0·040	−0·01	.....	.....
1417	+62	2059	31205	.....	−0·043	+0·07	.....	.....
1418	+37	4537	31210	.....	−0·055	−0·23	.....	.....
1419	+85	383	31223	Nξ	−0·257	−0·24	−0·220	−0·21
1420	+56	2755	31235	.....	−0·013	+0·25	.....	.....
1421	+30	4685	31244	.....	+0·029	+0·46	.....	.....
1422	− 2	5741	31257	842	+0·022	+0·47	+0·009	+0·36
1423	+51	3358	31310	844	+0·005	+0·10	+0·008	−0·01
1424	+50	3706	31333	.....	−0·015	+0·68	.....	.....
1425	+17	4746	31338	1586	+0·023	−0·41	+0·015	−0·72
1426	+ 8	4874	31408	1588	+0·014	+0·26	+0·007	+0·05
1427	+26	4439	31415	1589	−0·020	+0·03	−0·020	−0·05
1428	−11	5850	31440	1591	+0·007	+0·14	−0·005	+0·03
1429	− 3	5460	31462	.....	+0·036	−0·60	.....	.....
1430	−11	5855	31468	.....	+0·005	−0·33	.....	.....
1431	+39	4871	31488	.....	−0·010	−0·33	.....	.....
1432	− 0	4384	31534	850	−0·007	−0·07	−0·020	−0·28
1433	−18	6154	31540	.....	+0·008	−0·16	.....	.....
1434	+49	3903	31556	.....	−0·040	+0·20	.....	.....
1435	+23	4576	31582	.....	0·000	−0·08	.....	.....
1436	− 8	5912	31593	.....	−0·011	+0·40	.....	.....
1437	+13	4971	31655	.....	−0·008	−0·09	.....	.....
1438	+10	4797	31664	855	+0·002	−0·12	−0·006	−0·27
1439	+30	4771	31668	.....	−0·047	+0·44	.....	.....
1440	+ 4	4896	31692	.....	+0·002	−0·08	.....	.....
1441	+29	4741	31706	857	−0·006	+0·47	−0·008	+0·32
1442	+18	5046	31753	1596	−0·004	−0·27	−0·003	−0·53
1443	+ 6	5060	31772	.....	+0·030	−0·07	.....	.....
1444	+22	4709	31776	859	+0·013	−0·06	+0·008	−0·27
1445	−20	6486	31794	1597	+0·002	+0·39	−0·010	+0·38
1446	− 2	5826	31796	1598	+0·025	−0·39	+0·004	−0·76
1447	−14	6346	31802	.....	+0·010	+0·12	.....	.....
1448	−26	16324	31806	.....	+0·007	−0·50	.....	.....
1449	+82	703	31855	.....	−0·095	−0·45	.....	.....
1450	+65	1814	31857	863	−0·021	+0·26	+0·004	+0·12
1451	+25	4828	31876	.....	+0·023	+0·02	.....	.....
1452	− 8	5968	31903	864	+0·020	−0·10	+0·005	−0·11
1453	+67	1475	31921	.....	−0·017	−0·44	.....	.....
1454	−16	6173	31943	866	−0·025	+0·44	−0·038	+0·42
1455	−17	6619	31944	.....	+0·007	+0·66	.....	.....
1456	+36	4956	31964	1600	−0·051	−0·27	−0·045	−0·58
1457	+55	2850	31986	.....	+0·006	−0·10	.....	.....
1458	+11	4904	31991	.....	+0·002	+0·05	.....	.....
1459	+83	640	31999	No	−0·088	−0·08	+0·136	−0·19
1460	−30	19370	32000	867	−0·031	+0·55	−0·051	+0·36
1461	+ 3	4799	32002	.....	+0·007	+0·19	.....	.....
1462	+19	5036	32003	.....	−0·015	+0·10	.....	.....
1463	+51	3514	32039	.....	+0·026	+0·42	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. Δα	O – G. C. Δδ	O – FK3 Δα	O – FK3 Δδ
	°				s	″	s	″
1464	− 0	4443	32065	.....	+0·028	−0·03	.....	.....
1465	− 7	5910	32079	.....	+0·046	+0·56	.....	.....
1466	+41	4664	32095	869	−0·035	−0·34	−0·036	−0·63
1467	−21	6354	32105	.....	+0·016	+0·03	.....	.....
1468	+62	2160	32119	.....	−0·062	−0·49	.....	.....
1469	+27	4480	32135	870	−0·019	+0·47	−0·022	+0·17
1470	+14	4926	32149	871	+0·013	−0·20	+0·004	−0·42
1471	+34	4847	32202	.....	−0·031	+0·05	.....	.....
1472	+19	5060	32207	.....	−0·006	−0·18	.....	.....
1473	+29	4862	32215	.....	+0·031	−0·52	.....	.....
1474	+45	4149	32216	.....	−0·059	−0·03	.....	.....
1475	+ 7	4981	32252	.....	+0·016	−0·31	.....	.....
1476	+42	4592	32288	.....	+0·008	−0·37	.....	.....
1477	− 6	6170	32346	1607	+0·026	−0·22	+0·012	−0·34
1478	−11	6032	32354	.....	−0·004	−0·78	.....	.....
1479	+24	4737	32368	.....	−0·015	+0·21	.....	.....
1480	− 4	5852	32369	.....	+0·030	+0·43	.....	.....
1481	+ 2	4648	32415	878	+0·002	−0·39	−0·008	−0·58
1482	−18	6283	32467	.....	+0·022	−0·48	.....	.....
1483	+ 4	4997	32491	.....	+0·047	+0·10	.....	.....
1484	+37	4817	32510	1610	+0·019	+0·19	+0·007	+0·17
1485	+59	2710	32538	.....	−0·020	+0·29	.....	.....
1486	+11	4993	32543	.....	+0·020	+0·04	.....	.....
1487	−21	6420	32594	.....	+0·035	+0·11	.....	.....
1488	+ 0	4998	32620	884	+0·007	−0·22	+0·003	−0·42
1489	−12	6496	32648	.....	+0·023	+0·37	.....	.....
1490	−26	16654	32654	.....	−0·028	+0·04	.....	.....
1491	+15	4830	32665	1615	−0·018	+0·57	−0·042	+0·22
1492	− 1	4443	32672	.....	+0·053	−0·25	.....	.....
1493	+86	344	32680	.....	−0·099	+0·03	.....	.....
1494	+27	4566	32710	.....	−0·002	+0·06	.....	.....
1495	+ 6	5168	32732	.....	+0·022	−0·49	.....	.....
1496	+77	909	32733	.....	−0·009	+0·11	.....	.....
1497	+52	3469	32743	.....	−0·016	+0·33	.....	.....
1498	+21	4952	32759	.....	+0·006	+0·08	.....	.....
1500	+66	1619	32796	.....	−0·070	+0·14	.....	.....
1501	+ 1	4744	32818	.....	+0·022	−0·33	.....	.....
1502	+43	4508	32831	.....	+0·018	−0·38	.....	.....
1503	−15	6464	32843	.....	−0·031	+0·26	.....	.....
1504	+49	4180	32864	.....	−0·013	+0·35	.....	.....
1505	+73	1047	32872	.....	−0·053	+0·17	.....	.....
1506	+76	928	32875	893	+0·041	−0·12	+0·145	−0·28
1507	+ 4	5035	32879	892	+0·010	−0·10	+0·005	−0·26
1508	+36	5074	32892	.....	−0·020	+0·01	.....	.....
1509	− 8	6166	32893	.....	−0·001	−0·17	.....	.....
1510	− 3	5707	33029	1623	+0·018	−0·01	+0·012	−0·11
1511	−28	18353	33050	896	+0·006	+0·22	−0·014	+0·07
1512	−28	18361	33055	.....	+0·014	−0·39	.....	.....
1513	−22	6199	33058	1624	−0·010	+0·42	−0·019	+0·26
1514	+63	2064	33089	.....	−0·104	−0·58	.....	.....

Cat. No.	B. D. or C. D. No.		G. C. No.	FK3 No.	O – G. C. $\Delta\alpha$	O – G. C. $\Delta\delta$	O – FK3 $\Delta\alpha$	O – FK3 $\Delta\delta$
	°				s	″	s	″
1515	+ 8	5127	33094	.....	+0·007	+0·25	.....	.....
1516	+ 2	4725	33112	.....	+0·005	−0·10	.....	.....
1517	+18	5231	33119	898	0·000	+0·16	−0·004	−0·03
1518	+82	743	33205	Nπ	−0·068	−0·13	+0·003	−0·36
1519	+21	4999	33208	1628	+0·026	+0·16	+0·024	−0·12
1520	−16	6394	33242	.....	+0·001	+0·03	.....	.....
1521	+34	5039	33243	.....	+0·002	−0·28	.....	.....
1522	+54	3082	33257	.....	−0·031	+0·39	.....	.....
1523	+ 6	5227	33262	902	+0·001	−0·17	−0·006	−0·30
1524	− 6	6335	33273	.....	−0·008	−0·38	.....	.....
1525	+ 7	5121	33341	.....	+0·025	−0·33	.....	.....

CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

Volume XV No. 4

THE OTTAWA PHOTOGRAPHIC ZENITH TELESCOPE

BY

M. M. THOMSON

METHOD AND FORMULAE USED IN P.Z.T. PLATE MEASUREMENT

BY

R. W. TANNER

A PROGRAM MACHINE FOR AUTOMATIC OPERATION OF THE OTTAWA P.Z.T.

BY

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EDMOND CLOUTIER, C.M.G. O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1955

600—1955

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The Ottawa Photographic Zenith Telescope

BY

M. M. THOMSON

ABSTRACT

The Ottawa photographic zenith telescope, utilizing a 10-inch objective of 14 feet focal length, was first tested in June 1951, and has been operated continuously since October 1951. More than 500 plates have been secured for the purpose of determining fundamental time and variation of latitude. Mean error of a clock correction from a single star is $\pm$ $^{s}.027$. Mean error of a latitude determination from a single star is $\pm$ $0''.29$. A description of the Ottawa instrument, methods used for reducing observations, and a discussion of results is presented.

HISTORICAL

The origin of the modern P.Z.T. dates back to the days of the Astronomer Royal, Airy, who designed a reflex zenith telescope about the year 1850. Its purpose was to continue observations of the zenith star γ Draconis which had been studied for parallax and aberration, and for the determination of the latitude of London. In 1888 Küstner announced the variation of latitude, resulting in increased attention to precise latitude observing. Twenty years later F. E. Ross (1) of the United States Coast and Geodetic Survey used the Airy principle in the development of a photographic zenith telescope (P.Z.T.) for the measurement of latitude variation. In the latter half of the 1920's F. B. Littell and J. E. Willis (2) of the United States Naval Observatory adapted the P.Z.T. to time determination and soon established its superiority over visual observations via the conventional transit telescope.

Preliminary investigations into the use of a P.Z.T. at Ottawa were commenced prior to World War 2, but the project did not become active until 1946 when a recommendation from the executive committee of the International Astronomical Union was received by R. Meldrum Stewart, Dominion Astronomer, advocating the location of such an instrument in Ottawa. Following Mr. Stewart's retirement in the same year, his successor, C. S. Beals, asked the Positional Astronomy Division to prepare concrete plans for the instrument, and public funds were appropriated for the project in 1949–50.

GENERAL DESCRIPTION

A photographic zenith telescope is mounted rigidly in a vertical position and its range of operation is limited to those stars which culminate close to the zenith in their apparent daily motion from east to west. It is a reflex instrument. Light enters through an objective at the top to a mercury basin at the bottom, then is reflected back on itself and comes to a focus on a small photographic plate located close to and just below the objective. As a consequence of the reflex characteristic, a P.Z.T. with a focal length of, say, 14 feet requires little more than 8 feet of head-room.

The components of the Canadian P.Z.T. are contained in three sections, the rotary, the main tube and the mercury basin. The rotatable head, or rotary, is so called because it is turned through half a circle between each exposure. Contained within it are the

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objective lens and the photographic plate. In order to secure point images, the plate is moved at stellar speed by a precise lead screw. Control for the lead screw is a 1000-cycle motor attached to the side of the rotary which, with its associated gearing, permits the screw to be turned in either direction. No matter which way the rotary is oriented, head east or head west, the plate may always be driven from west to east. The 1000-cycle frequency is derived from a quartz clock. The rotary is of aluminum, for lightness, except for a steel ring at its base. Gear teeth on the side of the ring provide a means of rotation by the reversing motor, while the smooth base of the ring rests on and is

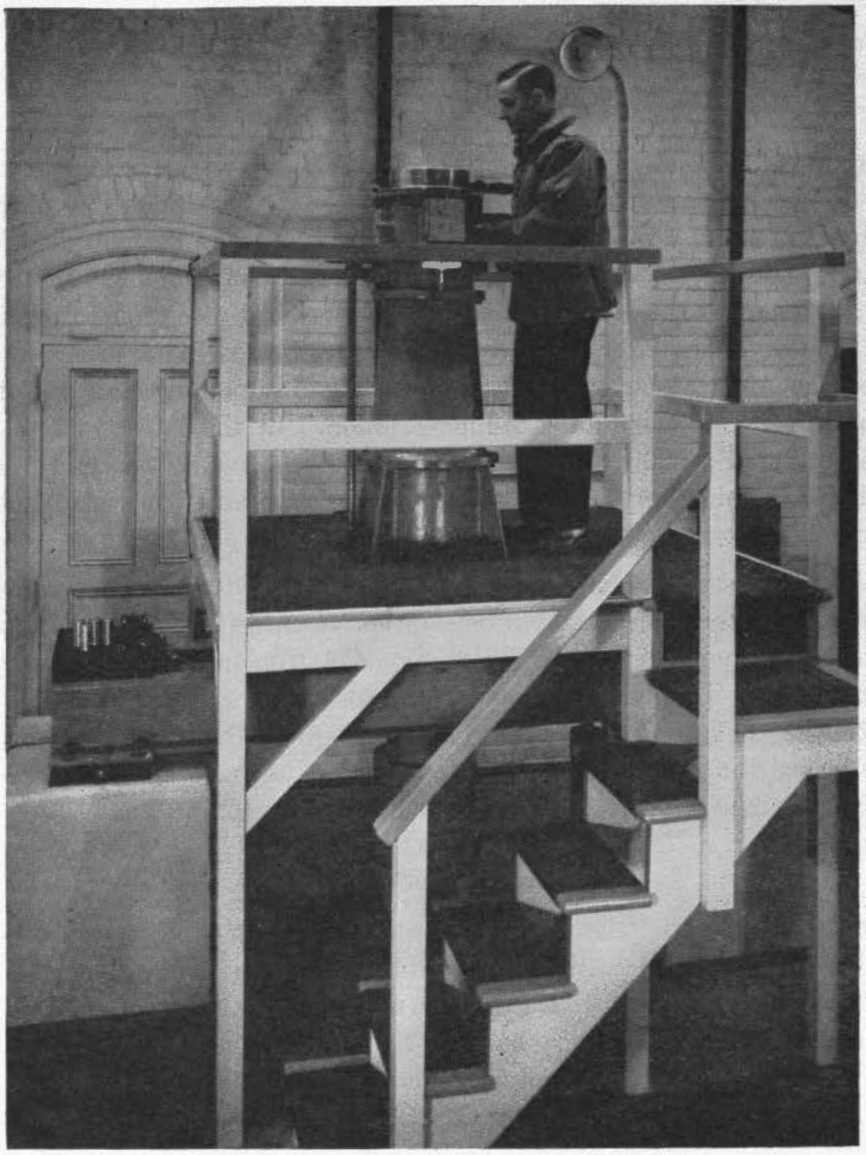


FIG. 1. Ottawa Photographic Zenith Telescope (P.Z.T.) designed with 10-inch objective lens with a focal length of 168 inches (14 feet). The light from a star passes through the lens and is reflected by a mercury mirror at the base to focus on a 2 × 2 inch photographic plate located about ½ inch below the lens.
Field of view is 30 minutes of arc.
The telescope is supported by two 8-inch "I" beams and mounted on two cement piers isolated from the building to eliminate vibration.

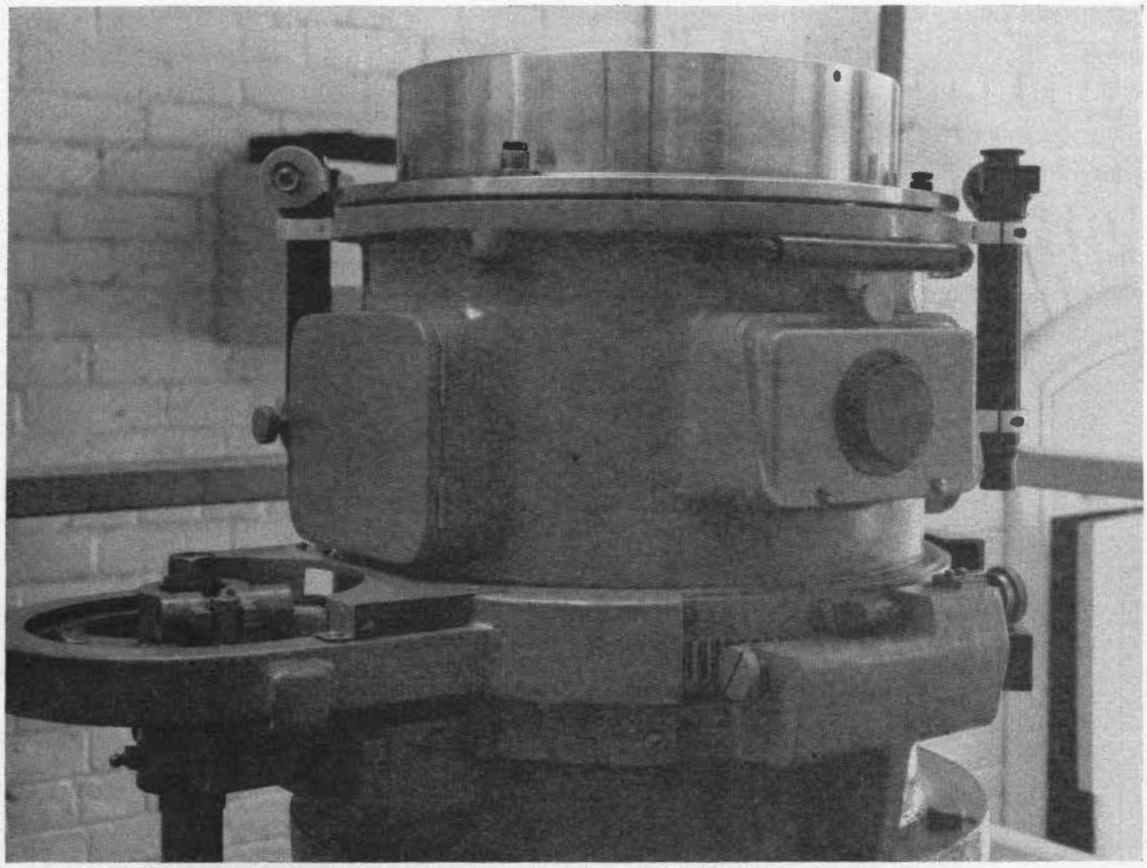


FIG. 2. Ottawa P.Z.T. head in the "motor west" position. A vertical shaft from the gear box engages the gear which reverses the head to "motor east" position and then back again between successive exposures. Access doors permit loading of the photographic plate and access to wires. The lens cell is held to the rotary head in strict adjustment by three push pull screws. Two microscopes on the rotary in conjunction with finely etched stationary marks provide accurate adjustment of the 180-degree reversal.

constrained by roller bearings in the top of the main tube. The main tube is securely fastened to two heavy I beams which are supported on two cement piers. Also mounted on the I beams is the ⅛th h.p. reversible a.c. motor and associated gear box which is connected by a vertical transmission rod to the gear ring of the rotary to provide the 180° reversal. The lower portion of the main tube may be raised to gain access to the mercury basin which is independently attached to the same cement piers by two lengths of angle iron. The basin containing the mercury reflector is itself floating in mercury to cushion it from vibrations, and hence defines the zenith accurately. An exhaust fan connected by a rubber duct to the vent at the base of the mercury basin keeps the air in motion down through the telescope at all times except during an exposure.

DESIGN OF CANADIAN P.Z.T.

The design of the Canadian P.Z.T. was based on drawings prepared by the United States Naval Observatory for their new instrument now at Richmond, Florida. Modifications in the plans were necessitated due to differences in the focal length, the objective size, and the location in latitude.

It had been remarked by the advisory group at Washington that the minimum focal length of a P.Z.T. should be about 12 feet. Scintillation and refraction irregularities would place an upper limit of about 20 feet. The original Washington instrument has a focal length of 17 feet and an 8-inch objective. The two new P.Z.T.'s then in prospect were for Richmond, Florida, focal length 12 feet 6 inches with an 8-inch objective, and for Greenwich, England, 11 feet 3 inches with a 10-inch objective. In order to provide a plate scale a little greater than one minute of arc per millimeter, a focal length of 14 feet was settled upon for Ottawa. The plate scale is therefore close to 48 seconds of arc per millimeter.

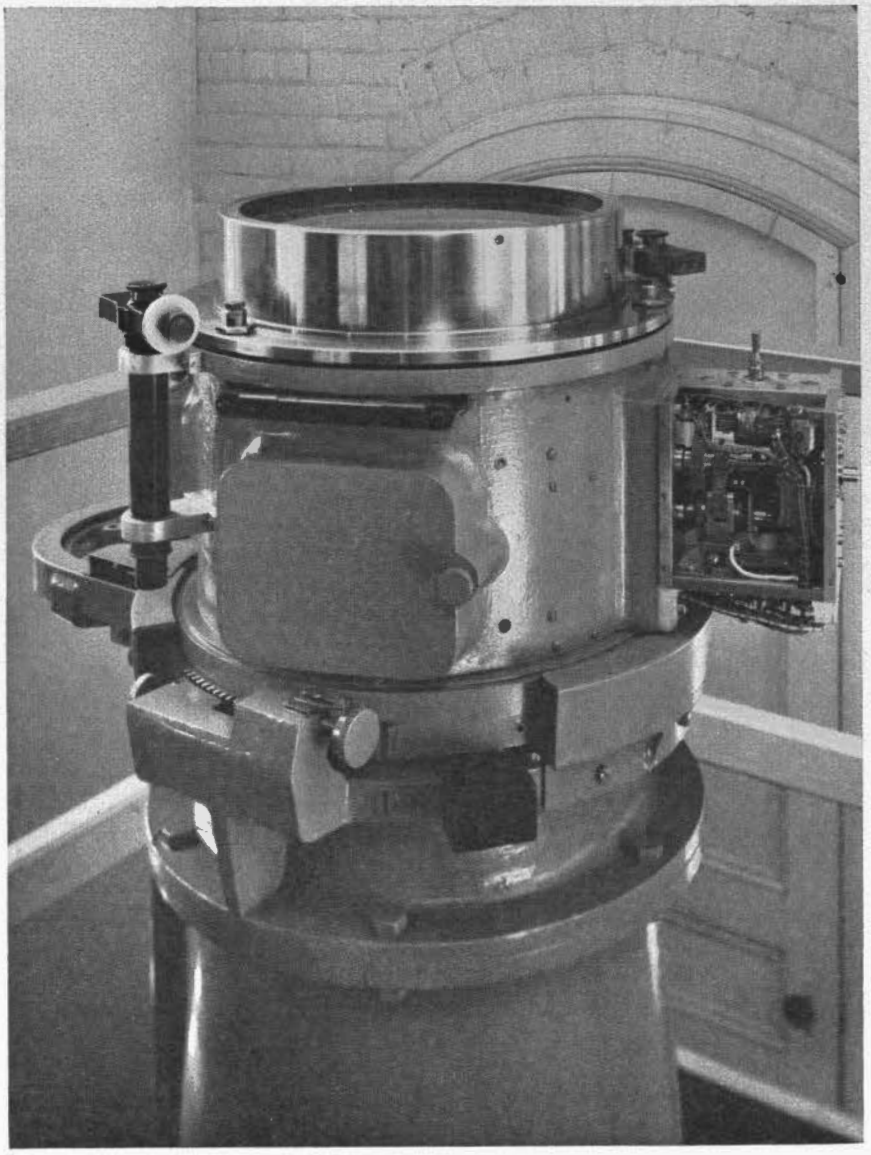


FIG. 3. Ottawa P.Z.T. with head partly turned to show the 1000-cycle motor which is the nerve center of the telescope. With a 1000-cycle control from a quartz crystal source, the motor serves to drive the plate carriage back and forth, and to operate all the switches which control the opening and closing of the exposure shutter, the direction of plate carriage drive, and the reversal of the head between exposures.

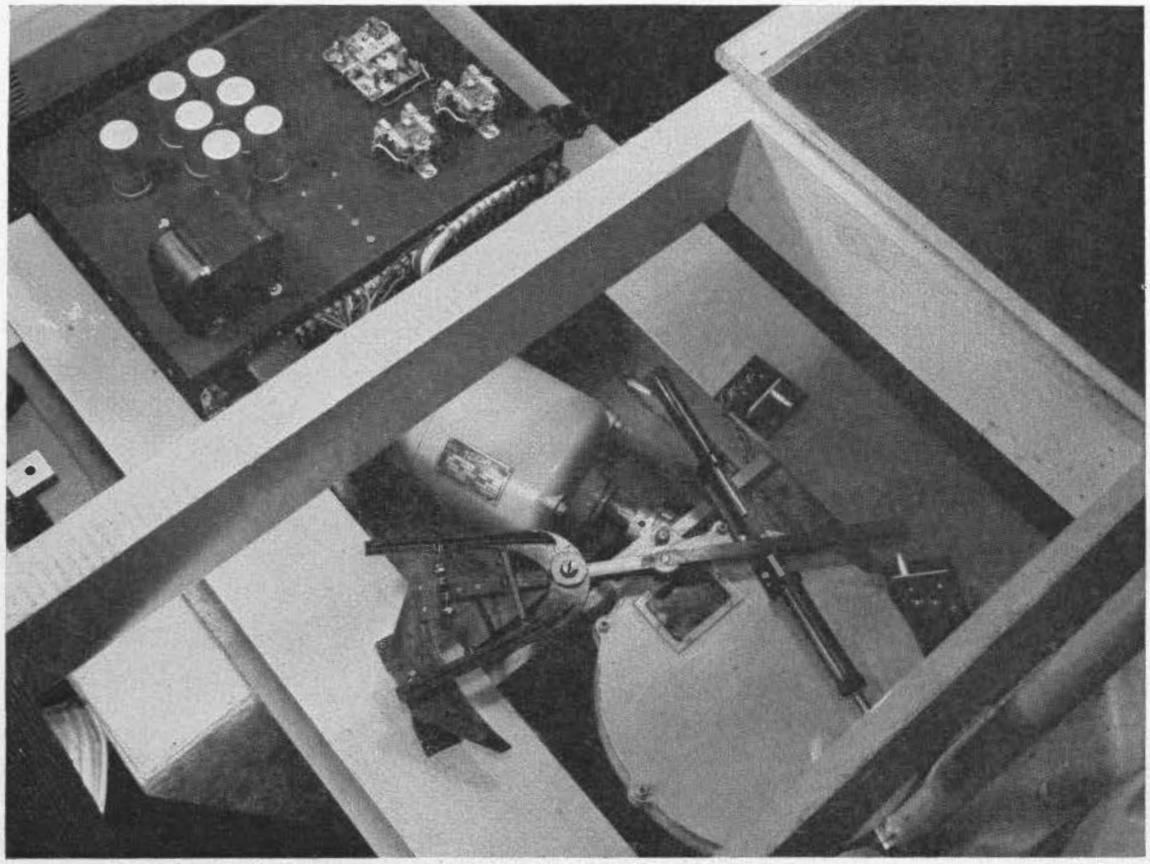


FIG. 4. Ottawa P.Z.T. gear box, reversing motor, and switching mechanism for the automatic reversal of the rotor. An 18-inch boom, driven at its center pin by an arm within the gear box, serves to (a) throw a motor limiting toggle switch with its spring loaded jaws, (b) throw one of two safety switches in case of over run. Spring loaded plungers return the boom to neutral as soon as reversal commences. Also shown is the chassis containing relays, rectifiers and cable terminal strips.

A survey of zenith stars for the Ottawa instrument indicated that it would be necessary to observe stars as faint as the ninth and tenth magnitudes. For this reason an objective of 10 inches in diameter was chosen. The spectral region between 4000 and 5000Å is utilized with plates sensitive to the blue.

The casting and figuring of the objective were assigned to Perkin-Elmer Company of Glenbrook, Connecticut, with the following specifications:

1. Back focal length 14 feet (168 inches).
2. To be used with plates sensitive only to wave lengths shorter than 5000Å
3. Back focal length to be approximately 0·5 inches greater than the equivalent focal length. (The rear nodal point to be behind the final glass surface at least one centimeter). Equivalent focal length to be 167 inches.
4. Diameter 10·4 ± 0·04 inches (264 ± 1 mm), clear aperture 10 inches (254 mm).
5. Chromatic aberration. The foci for wave lengths of 4860Å (F, hydrogen) and 4050Å (h, mercury) on the axis, as determined photographically by auto-collimation to be within 0·04 inches (1 mm) of each other. (The value secured by auto-collimation is double the actual permissible chromatic difference).

6. Spherical aberration. Under test by means of the Foucault knife-edge test by auto-collimation as near the axis as is practicable, with light of 4360Å wave length, the foci of all zones to be within a range of 0·16 inch (4 mm). (This again is double the extreme permissible longitudinal spherical aberration).
7. Coma. To be no noticeable comatic flare of star image by auto-collimation with the object and image each 1·6 inches from the axis (38 mm).
8. Glass. The glass to be of such quality that no striae are visible when the knife edge test by auto-collimation is used. No bubbles or other light absorbing or scattering particles larger than 0·02 inch (0·5 mm) to be tolerated. Freedom from all such particles is desirable, but as many as 12 below the size specified will be tolerated (total in all components).
9. Light Transmission. The transmission of the assembled lens measured at the focus for wave lengths of 4860Å and 4050Å to be at least 70 per cent.
10. The objective to be furnished mounted in a suitable metal cell of stainless steel, having a co-efficient of expansion closely approximating that of glass; handles to be fitted to facilitate removal. Springs to be incorporated into the cell which will press against the sides of the objective elements in such a manner as to positively prevent any motion of the elements within the cell.

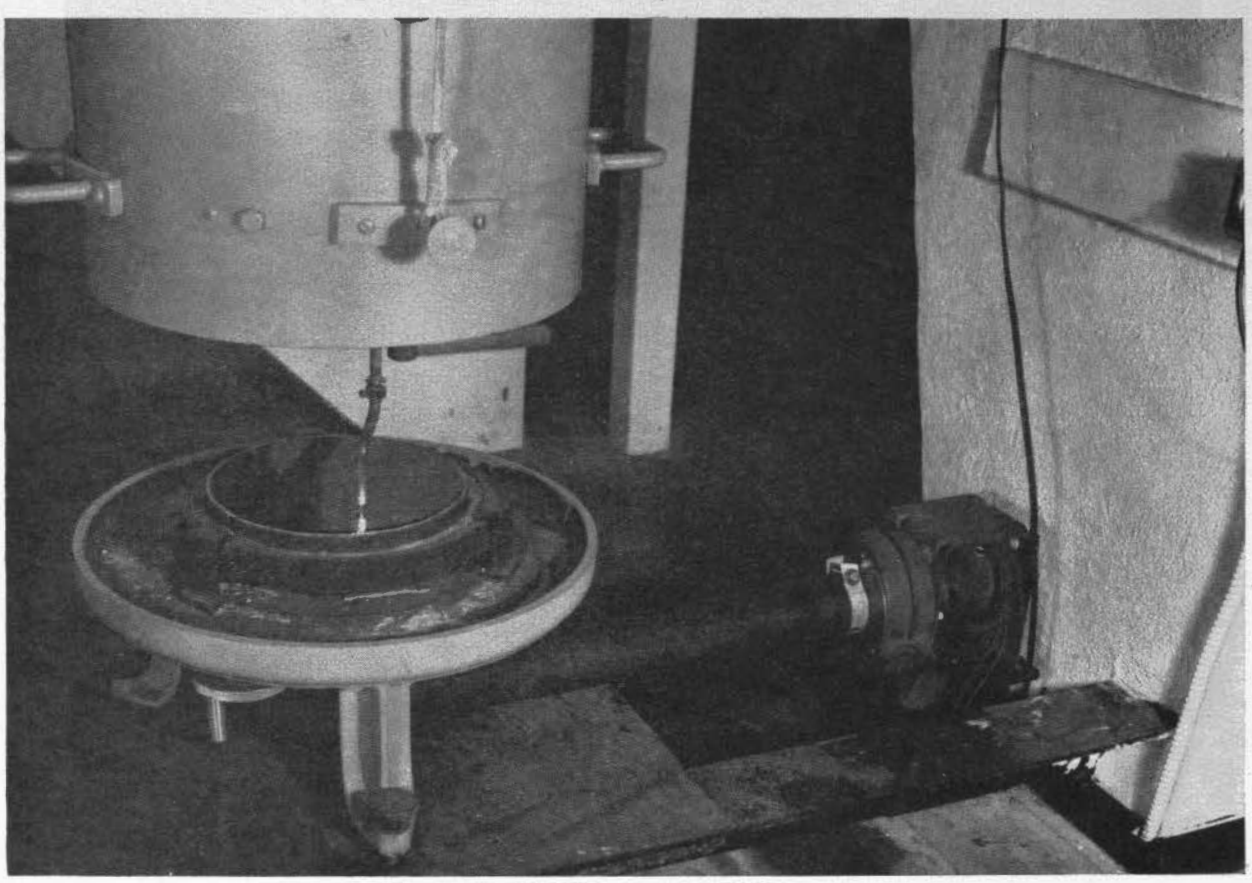


FIG. 5. Ottawa P.Z.T. floating mercury reflector and focussing rod. Mounted on the floor near the pier is a fan which draws a current of air through the telescope between star observations to prevent air striations. The hood enclosing the mirror is seen in the "up" position, but is normally down during observations.

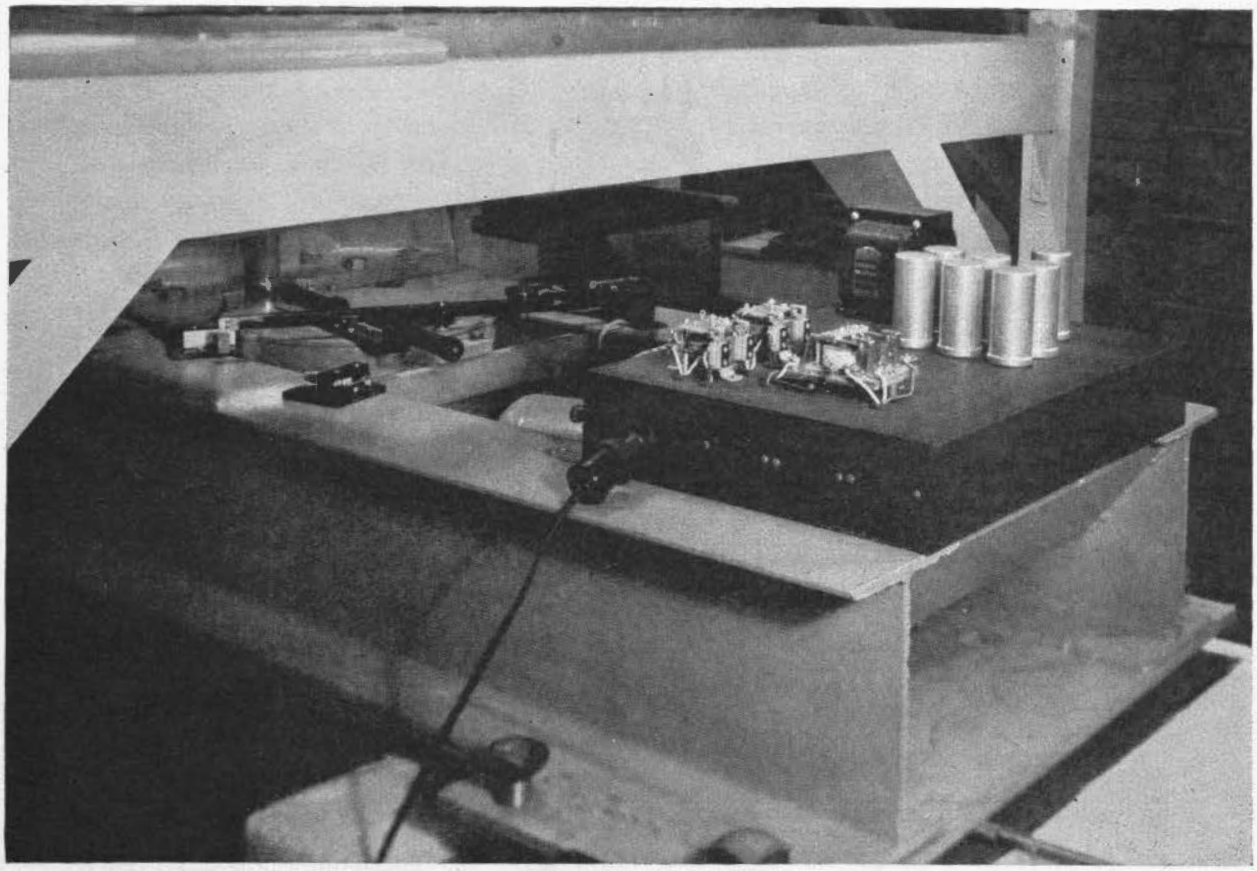


FIG. 6. Ottawa P.Z.T. showing "I" beams, gear box with switching arm, reversing motor and chassis containing relays, rectifiers, condensers and cable terminal strips.

11. A flat photographic field $\frac{1}{2}° \times \frac{1}{2}°$ required.

12. All glass surfaces to be coated to reduce reflecting losses.

The completed lens was tested in all respects in the optical section of the National Research Council, and was found to be well within required tolerances. The nodal point is 18·29 mm behind the vertex of the rear lens surface. Coating of all surfaces was inadvertently omitted at the time of construction and the performance on faint stars has been so satisfactory that it has not been added since.

The other precision components associated with the objective and rotary include the photographic plate carriage, the 1000-cycle motor, and the lead screw. They were made in the Observatory workshop using, with minor modifications, the drawings for the Richmond, Florida, P.Z.T.

According to the theory of the instrument the plane of the photographic plate must contain the Gaussian or second nodal point of the lens. Then any small tilt of the whole rotary about a horizontal axis will cause no displacement of the image on the plate. In the case of the Ottawa P.Z.T. the nodal point is 18·29 mm below the lower surface, so that sufficient space is available for easy loading of the plate holder. The plate is constrained in the holder by spring-loaded plungers against two edges and by a flat spring in the back cover. The holder slips under spring clips and then is bolted securely to the carriage.

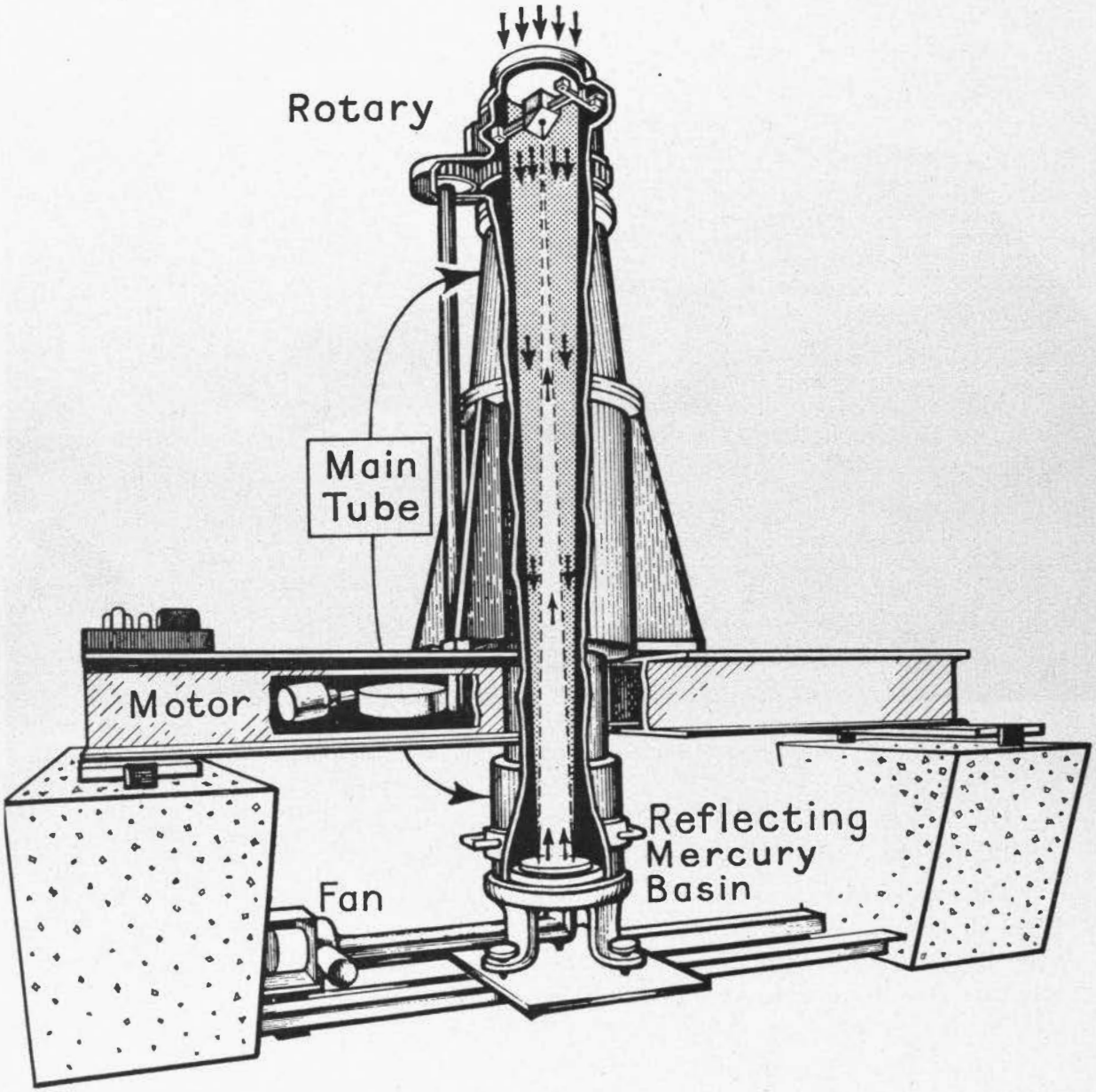


Fig. 7

OTTAWA P·Z·T·

Smooth motion for the plate carriage is provided by tripod mounting with a ball bearing at each foot riding on a hardened steel flat embedded in the aluminum of the rotary. The carriage must move freely in the east-west direction only. Constraint in north-south direction is provided at each end of the carriage by spring tension against two hardened flats which are mounted vertically. Fastened to one end of the carriage is the solenoid which operates the shutter through an arc of 70 degrees. In the closed position the shutter rests at an angle of about 20° to the horizontal, and when open is vertically down. At the opposite end to the solenoid, the carriage is held in contact with the lead screw by spring tension.

The lead screw is made of steel, and turns in a brass nut. Consideration was given at the time of construction to making the screw of hardened steel, but no facilities for hardening were available at the Observatory. So far there has been no evidence of uneven wear in the screw but a future modification may well include a hardened screw for the plate drive.

The pitch of the screw for the Ottawa P.Z.T. was determined from the following considerations:—

Latitude of Ottawa $= 45° \, 23' \, 38''.7$

Focal length $= 167 \cdot 47$ inches

Period of revolution $=$ 2 seconds mean solar time.

$$\text{Pitch} = 167 \cdot 47 \times \tan \tfrac{1}{2}' \times \cos 45° \, 23' \, 38''.7 \times 1 \cdot 0027379$$
$$= 0 \cdot 017151 \text{ inch.}$$

When refraction is included, the required pitch of the screw is $0 \cdot 0171466$.

$$\left(1 \cdot 0027379 = \frac{366 \cdot 2422}{365 \cdot 2422} = \text{factor for conversion of mean solar to sidereal interval}\right)$$

By manipulating the gears in the lathe of the Observatory machine shop a ratio was secured of:—

$$\frac{25}{243} \times \frac{1}{6} = 0 \cdot 017147 \text{ inch.}$$

The expected resolving power of the Toepfer plate measuring machine was of the order of $0 \cdot 001$ mm, which is equal to $0^{s}.004$. In actual practice, bisection of a good stellar image is made with an uncertainty of about $\pm$ 0.002 mm. Bench tests for periodic and progressive errors in the lead screw made before the P.Z.T. was assembled, have indicated that such errors are too small to be detected.

Vickers Limited of Montreal formed all the castings, after first redrawing the Richmond P.Z.T. plans to allow for the 10-inch objective and the 14-foot focal length. The rotary is of aluminum except for the gear ring, while the main tube and mercury basin components are of cast iron.

LOCATION

The location of the new P.Z.T. was dictated by the desire to keep it near the established meridian ($5^{h} \, 02^{m} \, 51^{s}.940$) for initial testing. Some thought was given to a properly designed, well ventilated, building close by on the Observatory grounds, but finally the observing pier and south collimator pier of the Cooke transit were levelled, and the

supporting I beams of the P.Z.T. placed between them. This location in our present transit house is about 10 feet east of the meridian circle, or equivalent to a difference of $0^{s}.014$ in R.A.

TEST OF P.Z.T.

Initial testing of the new instrument involved levelling, focusing, the adjustment in azimuth, and adjustment of the 180-degree reversal of the rotary. As a preliminary to levelling the instrument, it was first ascertained by bench tests that the steel ring at the base of the rotary and the plane of the plate carriage were parallel. Two spirit levels were then mounted on the side of the rotary which permitted the whole telescope to be levelled on its three-point base. An additional level adapted to test the objective relative to the rotary was used in conjunction with the three push pull mounting screws of the cell to bring it level with the plane of the plate carriage.

Focusing is accomplished by raising or lowering the mercury reflecting surface. A preliminary adjustment was secured by measuring with a steel tape 83·7 inches from the emulsion surface of the photographic plate to the mercury surface. Subsequent adjustments were made using stellar images. It is not necessary to have a numerical measure of best focus if some means is available for preserving it from night to night. An invar rod, pointed at the bottom, and with the bottom section bent and in a swivel so that it may be turned away from the mercury surface, preserves the exact distance from the mercury reflector to the photographic plate.

Azimuth orientation was provided initially by simply aligning the mounting beams parallel to the transit room wall and the slit opening by visual estimation. Successive adjustments were provided by star trailing. The shutter is held open permitting a star to trail in to the center of the plate. The plate is then driven for the maximum interval available, (about 40 seconds), after which the star trails off to the far edge. Any error in azimuth causes a north-south component in the motion of the plate carriage. The trail in to and out from the stellar image will form two parallel lines instead of two sections of the same straight line, and the stellar image will be elongated in the north-south direction.

The rotary is turned through exactly 180 degrees between each exposure. A precise indication of the amount of rotation is provided by two microscopes fixed on opposite sides of the rotary and focused on fiducial marks attached to the main tube. The micrometer eyepieces measure 4·5 seconds of arc per division, which is the tolerance within which the stops are adjusted.

CONTROL

Control of P.Z.T. exposures at first was effected by a small console located in the Time Room. One toggle switch started and stopped the exposure sequence, while a second switch turned the telescope exhaust fan off and on. The procedure was to turn the fan off one minute before each exposure, and turn it on again immediately afterwards. Failure to turn it off caused a disturbance to the mercury surface resulting in blurred and distorted images. Three colored pilot lights indicated when the rotary was located with head west or head east, or was in transition from one position to the other. It was desirable to commence each exposure on the exact second, because in some cases a

deliberate advance or delay had been arranged to avoid stars of the same zenith distance being superimposed. In December 1952 a P.Z.T. Program Machine, using synchronously driven punched tape, was placed in service and now provides automatic control of each night's observing. Only occasional attention needs to be given, and time may be spent at other duties. (*see* page 351).

FIG. 8. Controls for the Ottawa P.Z.T. are located in the Time Room. The decade counter measures the fraction of a second between P.Z.T. impulses and second beats of the primary quartz clock. The two switches control the photographic sequence and the fan at the base of the telescope.

TIMING

Timing of the P.Z.T. exposures is effected by a contact (Figure 9) operated by a cam on the carriage drive screw. The raised portion of the cam causes the circuit to be alternately closed and opened each half revolution. One half revolution of the screw is accomplished in one second of mean solar time, being driven by the 1000-cycle motor with frequency derived from a quartz clock.

The makes and breaks are fed into a thyratron discharge tube which operates on both impulses to give the starting impulse for a decade counter. Alternate P.Z.T. impulses can be adjusted to within one or two milliseconds of uniformity. They will then bear the same phase relationship to the seconds beats of the control clock as long as the P.Z.T. 1000-cycle motor continues to run.

The Ottawa P.Z.T. 1000-cycle motor has been allowed to rotate continuously with no detectable wear. However the practice now is to start the motor afresh each night it is used. The motor, with its associated gear box, is serviced in both spring and autumn as a matter of routine practice. During the winter months, especially when temperatures at Ottawa are around − 18° C or colder, a few watts of heat have been fed into the motor box and the whole box insulated.

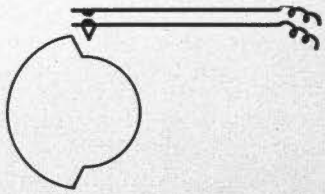


FIG. 9

The decade counter, started by the P.Z.T. impulse, is stopped by the seconds impulse from the control crystal clock, thus providing an accurate time interval in the sense from P.Z.T. to clock. While the decade counter provides time intervals accurate to one part in a million, it is read only to one part in a thousand, i.e., to the millisecond. Complete timing of a star transit is secured by recording the P.Z.T. impulses on a drum chronograph together with seconds beats from the control clock. Thus the hour, minute and second as well as the part of a second of each transit are obtained. However when looking for differences of a few milliseconds, the hour and minute become unnecessary. Indeed the whole seconds are ignored in the final stages of reduction.

THE PHOTOGRAPH

Four exposures, at exactly 30 seconds interval (mean time), are made of each star. Approximately 20 seconds are required for the actual exposure time, the remaining 10 seconds being used for the rotation of the rotary. As nearly as possible the four exposures are symmetrically disposed with respect to the meridian, (Figure 11a), except when a deliberate off-set is necessary to avoid superimposing two stars of the same zenith distance. Also an occasional pair of stars has to be staggered, one early and the other late by a few seconds, because they come too close together in transit time. Between each exposure the rotary head is turned through 180 degrees. Ideally, then, images 1 and 4 will be close to a line parallel to the meridian and symmetrical with respect to the prime vertical (Figure 11b). The same is true of images 3 and 2. The average distance normal to the prime vertical between 1 and 4, and also between 3 and 2, is a measure of double the zenith distance. Furthermore, since the exposures are made with a moving plate so as to give point images, they may be considered as instantaneous exposures at half-minute intervals. The distance on the plate in right ascension from image 1 to 3, or from 4 to 2, represents exactly one minute of mean solar time.

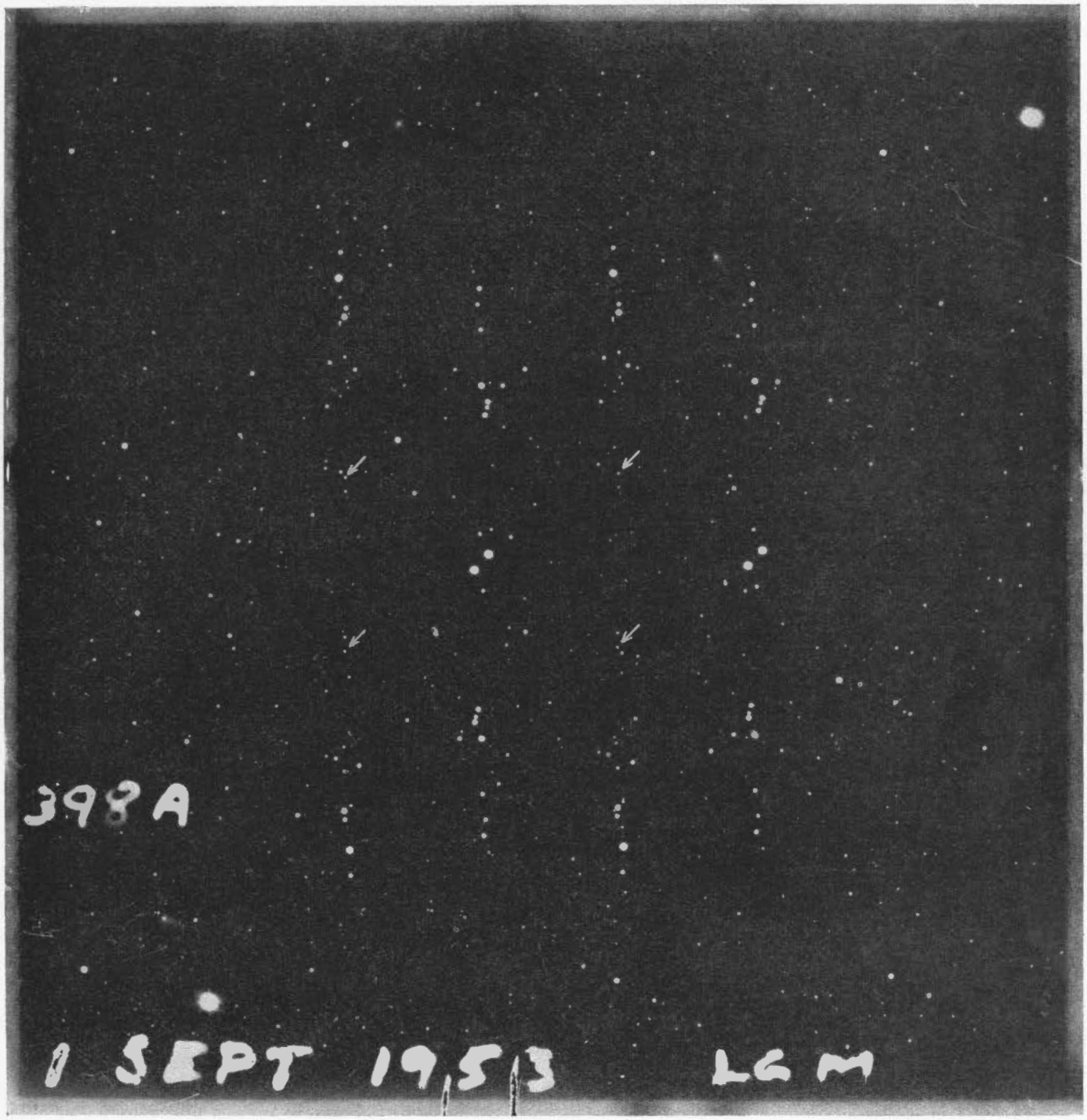


FIG. 10. Plate 398A exposed on September 1, 1953. Groups XI and XII, comprising 24 program stars together with a considerable number of volunteers, are here recorded. Magnitudes range from 5 to 9 (photographic), and the groups were taken "head east" and "head west" respectively. The four bright images forming the pattern near the centre of the plate are from the star ρ Cygni, magnitude 5·22 (photographic). BD 44° 4263, magnitude 9·1 (photographic) is indicated by the arrows.

For the purpose of deriving the mathematical relationship between time of transit and the positions of the star images on the plate, it is geometrically equivalent to suppose that the star moves at a uniform rate up to the meridian and then instantly reverses and moves back in the opposite direction at the same rate.

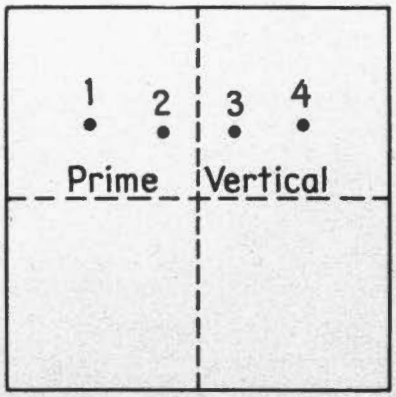
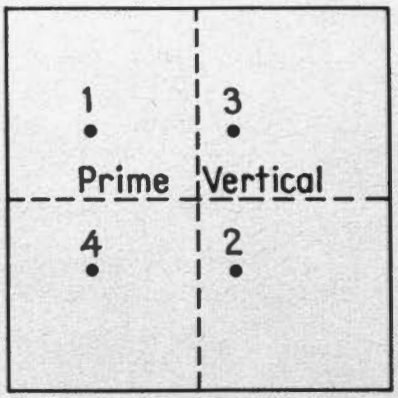


FIG. 11 a



Meridian

FIG. 11 b

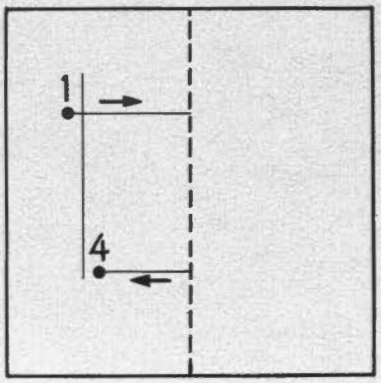


FIG. 12

Let us restrict our attention to Figure 12. The arrows indicate the direction of the stellar motion at the times that the two disc-like images are impressed on the plate. The dotted line represents the meridian. Let v (in mm/sec) represent the velocity of the star (and plate); t_1 be the contact time of image 1 and t_4 the corresponding contact time (when the carriage is in the same position relative to the meridian) for image 4. Also let x_1 be the distance of image 1 from the meridian and x_4 the distance of image 4 from the meridian. Then the time of meridian passage of the star may be expressed as:—

$$t_0 = t_1 + x_1/v = t_4 - x_4/v$$

$$\text{or } t_0 = (t_1 + t_4)/2 + (x_1 - x_4)/2v$$

The important point about this equation is that the value of t_0 depends on t_1 and t_4 which are determined by a chronograph, and $x_1 - x_4$ which is measured directly on the plate.

In order to use the information on the plate, accurate measurements must be made by some arbitrary scale in the two coordinates which are parallel to the meridian and to the prime vertical. From the diagrams, it may be seen that the prime vertical is very nearly parallel to the directions from 1 to 3 and from 4 to 2.

MEASURING MACHINE

Pending completion of a new projection type instrument, a Toepfer measuring engine has been used at Ottawa. The Toepfer has two slides at right angles to each other. The lower slide, to which the plate is clamped, is actuated by a screw with a half mm pitch which has a range of 50 mm. The other slide which contains the microscope with its fiducial lines, has a pitch of 1 mm and a range of 50 mm. The ratio in pitch between the two screws has been measured as 1·9990. Also the directions of the two slides differ from 90 degrees by 10′ 15″, the tangent of which is 0·00298. Using the fact that the distance from image 1 to 3 and from 4 to 2 in each case represents one minute of mean solar time, the scale (in arc at the zenith) of the horizontal screw, denominated S''_α, is 24″.22994 per revolution. Using the ratio 1·9990, the scale value for the other slide, which is used to measure zenith distance, is S''_δ = 48″.43565. Alternatively one may say that the measure of 1 minute mean solar time in right ascension at the zenith is equal to 26·155 revolutions of the half mm screw; 2 × 26·155 revolutions is designated 2D for a zenith star. For a star not in the zenith, the scale value varies by the ratio of the cosine of the star's declination to the cosine of the latitude (45° 23′ 38″.7). The change in value is small but it distinguishes north stars from south stars. Also it is used in determining the scale value of a particular plate. Accordingly Table 1 has been constructed with the measured value of 4 × Z.D. as argument, against which are tabulated $S''_\alpha \times \sec \delta/60r$ and 2D. "r" is the conversion factor 1·0027379 mean solar to sidereal.

GEOMETRY OF PLATE REDUCTION

In Figure 13 consideration is centered on a south star which has been observed early. First exposure was made with head west. In the measuring machine it is placed emulsion up, i.e., toward the microscope, with the first image at the lower left and at the high reading in both α and δ scales. After the plate has been carefully aligned, there remains the small angle B between the axis of the horizontal screw and the prime vertical. OA is the direction of the prime vertical.

First it is required to find B.

$$\tan B = \left\{\frac{(1+4)^\delta}{2} - \frac{(3+2)^\delta}{2} + \frac{\zeta}{2}\right\} S''_\delta \div 26\cdot155\ S''_\alpha$$

$$= \tfrac{1}{2}\{(1+4)^\delta - (3+2)^\delta + \zeta\} \div 13\cdot078$$

$$= (-\kappa) \div 13\cdot078$$

κ takes on the opposite sign to $\frac{1}{2}\{(1+4)^\delta - (3+2)^\delta + \zeta\}$

In practice κ is kept small, less than 0·010. But even at the maximum of the table where κ = 0·020, tan B becomes 0·00152, and may be replaced by B with no sensible error.

ζ is a small correction applied to each star depending on the skew, i.e., the value $\{(1-4)^\alpha + (3-2)^\alpha\}$. It arises from the fact that the star path is curved, and not a straight line, as assumed in this simplified picture. It appears in the more rigorous discussion which follows (*see* page 349). For the latitude of Ottawa,

$$\zeta = 0\cdot00078\{(1-4)^\alpha + (3-2)^\alpha\}$$

The value κ, the orientation correction factor, is determined by taking the average value of $\frac{1}{2}\{(1+4)^\delta - (3+2)^\delta + \zeta\}$ for all the stars. Some judgment is exercised in eliminating a star by reason of a faulty image, or generally poor seeing.

An orientation factor κ means that the measured values of right ascension displacement, $(1-4)^\alpha$ and $(3-2)^\alpha$ are not correct. In Figure 13, $(1-4)^\alpha$ is EM, while the required value is DM.

$DM=(1-4)^\alpha+2(1-4)^\delta B$ (where α and δ indicate direct scale readings). (B is small enough that $\cos B=1$ and $\sin B=B$ with no error). $2(1-4)^\delta$ may be taken as $\{(1-4)^\delta+(3-2)^\delta\}$ which is a tabulated value. Also tabulated is the value $\{(1-4)^\alpha+(3-2)^\alpha\}$ which is essentially double the quantity $(1-4)^\alpha$. The total plate correction to be applied to $\{(1-4)^\alpha+(3-2)^\alpha\}$ is hence $2\times\{(1-4)^\delta+(3-2)^\delta\}B=4ZD(-\kappa)/13\cdot078$.

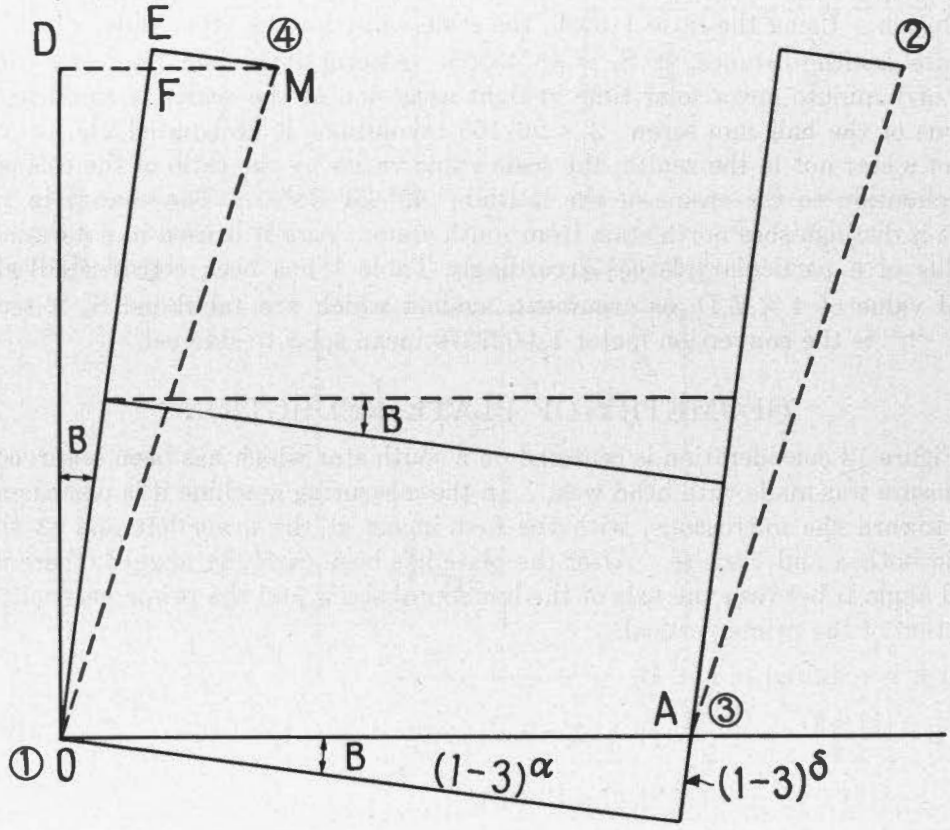


FIG. 13

From auxiliary measurements, using the same reticle face up and face down, the angle between the Toepfer slides was found to be less than 90° by 10′ 15″, an angle whose tangent is 0·00298. To the plate correction factor of $(-\kappa)/13\cdot078$ must be added 0·00596, the measuring machine constant. The total plate correction is then $4Z(0\cdot00596-\kappa/13\cdot084)$.

Table III provides the correction to the δ screw readings $\{(1-4)^\delta+(3-2)^\delta\}$ due to the combined effect of the κ factor and the angle of deviation between Toepfer slides. In Fig. 13, the required value is:

$$OD=(1-4)^\delta-\tfrac{1}{2}(1-4)^\alpha B$$

Both $(1-4)^\alpha$ and B have polarity. In the above example (Fig. 13), $(1-4)^\alpha$ is positive and B is positive. So the measured value of OE must be reduced by a small quantity. Table III is entered with arguments κ and $\{(1-4)^\alpha+(3-2)^\alpha\}$. The correction to $\{(1-4)^\delta+(3-2)^\delta\}$ is $\frac{1}{2}\{(1-4)^\alpha+(3-2)^\alpha\}(-\kappa)/13\cdot078$.

Table IV provides the correction to the zenith distance measures which are required due to a change in plate scale. On any plate the measured values of 2D for all the stars are compared with the tabulated values for the same zenith distances. The mean of the residuals of each star value, in the sense observed minus tabulated, is an indication of the amount that the overall scale of the plate differs from the adopted value. To recapitulate, the adopted value of the α screw:—

D = 60 seconds mean solar time = 26·155 revolutions.

Ratio of the two screws 1 : 1·9990

1 rev. of dec. screw = 48″.4356 (as given above).

The tabulated value $\{(1-4)^\delta+(3-2)^\delta\}$ is 4 times the actual zenith distance; hence the quarter scale value of S_δ'' is required, namely 12·108928.

Change in plate scale is the quantity:—

$$\Sigma\left\{\frac{(1-3)^\alpha+(4-2)^\alpha-2D}{n\times 2D}\right\}\times 12\cdot1089 \text{ (per rev. change in scale)}$$

$$=\Sigma\left\{\frac{(1-3)^\alpha+(4-2)^\alpha-2D}{n}\right\}\times 0\cdot00023146 \text{ per } 0\cdot001 \text{ rev. change in scale.}$$

If the observed value of 2D exceeds the tabulated, it means that there are fewer seconds of arc per revolution of the dec. screw. Hence the legend that the correction in scale is applied to 12·1089 with the opposite sign to $\Sigma\left\{\frac{(1-3)^\alpha+(4-2)^\alpha-2D}{n}\right\}$.

The scale of the plate is initially dependent for its determination on the one known value, namely the 60 second time interval between images 1 and 3, and images 2 and 4 (Figure 11b). And as indicated above, variations in the plate scale will be reflected in the average value of 2D. However, once the catalogue of PZT stars has been completely observed and revised, small variations in plate scale are preferably referred to stellar declinations themselves. While the Ottawa 2D measure is equivalent to a zenith distance of about 5·5 minutes of arc, the root mean square zenith distance of the stars measured on a plate is more nearly 9 minutes of arc. A least square solution for scale correction of a plate of n stars may be obtained from a set of conditional equations of the form

$$\varphi_0+Sr_i=\varphi_i \qquad i=1, 2, \ldots n$$

where

S = scale correction

r = revolutions of declination micrometer (north stars +ve; south −ve.)

φ_0 = corrected average latitude of the night

$\varphi_i=\varphi_{\text{observed}}$ for each star

Thus

$$S=\frac{n\Sigma r_i\varphi_i-\Sigma r_i\Sigma\varphi_i}{n\Sigma r_i^2-\Sigma r_i\Sigma r_i}$$

also

$$\varphi_0=\frac{\Sigma\varphi_i\Sigma r_i^2-\Sigma r_i\Sigma r_i\varphi_i}{n\Sigma r_i^2-\Sigma r_i\Sigma r_i}$$

$$=\frac{1}{n}\Sigma(\varphi_i-Sr_i)$$

where (φ_i-Sr_i) is the corrected latitude derived from star i.

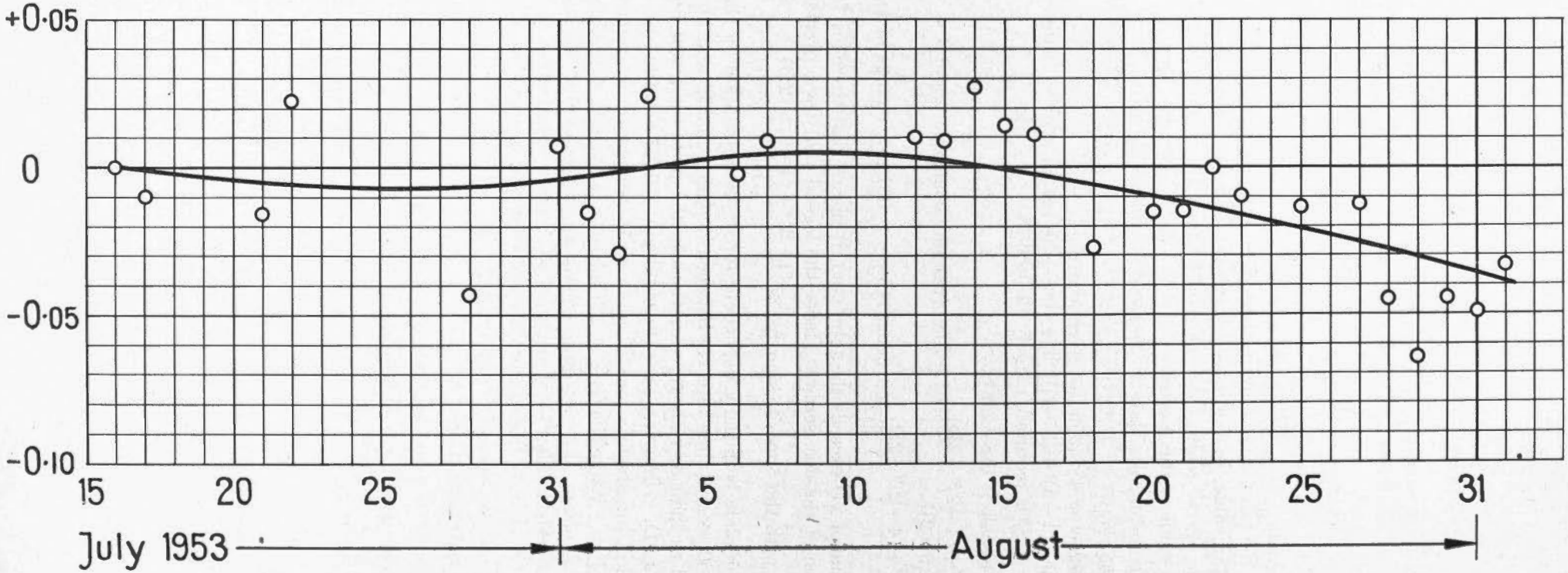


FIG. 14. X3 Quartz Clock Behaviour from PZT Observations

The P.Z.T. daily aberration correction, $-0^s.021$, when combined with the longitude difference $+0^s.014$ provides a constant correction $-0^s.007$ to the observed time.

PERFORMANCE

The performance of the Ottawa P.Z.T. is illustrated in Figure 14 which indicates the behaviour of a Western Electric quartz oscillator type D175730. The smooth curve was derived from a grouping of star results into periods of a month or more, and solving by least squares. Individual circles represent the clock correction for the date in question derived from stars observed over a 4-hour interval. Normally 24 transits are included. Cloudy weather reduced the number on a few nights, there being only 4 on August 1, but on July 17, August 6, 20, 22 and 27, observing was continued with an additional plate, increasing the number of transits to between 30 and 40. The data obtained on any one night is thus considerable. Yet the deviation from the adopted curve on two consecutive nights can be as great as $0^s.052$, as indicated on August 2 and 3.

The errors attendant on P.Z.T. performance are tabulated as mean errors, computed from Ottawa results for 1953.

	R.A.	Dec.
Uncertainty of catalogue position of star	$\pm^s.013$	$\pm''.14$
Plate error from criterion $x_1+x_2-x_3-x_4=0$	$\pm\cdot014$	$\pm\cdot15$
Toepfer measuring engine	$\pm\cdot005$	$\pm\cdot05$
Single observation compared to mean of night	$\pm\cdot027$	$\pm\cdot29$
Mean of the night from scatter of individual stars	$\pm\cdot006$	$\pm\cdot06$
Mean of the night from Δ T scatter on successive nights	$\pm\cdot017$	$\pm\cdot18$

The uncertainty of catalogue position is derived from the residuals to the star positions in 1953 after they have been corrected by the P.Z.T. observations in 1952. Plate error includes all the errors attendant on image displacement due to poor seeing, emulsion shift, scaling uncertainty, and instrumental errors. Ideally the distance from image 1 to image 3 is the same as the distance from image 4 to image 2 in right ascension, being a measure of 60 seconds of mean time. The error in declination in this case is simply a value in arc corresponding to the value in time. The contribution of the Toepfer measuring engine to the errors was derived from resetting on stellar images. The mean error of a single setting with the engine is $\pm 2\cdot2$ microns, corresponding to an uncertainty of $\pm 0^s.010$ or $\pm 0''.11$. When distributed over the 4 images measured for one star position, the measuring error reduces to $\pm 0^s.005$ or $\pm 0''.05$. It would be expected from this that the value of the night to night scatter should also be of the order of $\pm 0^s.006 = \pm 0''.06$. Instead it is three times as great. Independent comparisons among crystal oscillators relieve the clock of any responsibility for such a night to night scatter. It is suggested by Tanner and Miller (3) that such discrepancies may be due to varying inclinations of layers of equal density of air above the P.Z.T. or to small temperature gradients in the air inside the instrument. The error attendant on the timing of each exposure has not been assessed, but it is felt that its contribution to the total error is small.

The present location of the P.Z.T. must be considered as temporary. New meridian instruments are now usually mounted in buildings of small heat capacity, and plans are being formed to provide such a building for the Ottawa instrument.

TABLE 1

SOUTH STARS			NORTH STARS		
$(1-4)^{\delta}+(3-2)^{\delta}\alpha$	SCREW FACTOR	2D	$(1-4)^{\delta}+(3-2)^{\delta}\alpha$	SCREW FACTOR	2D
0.351	.57350	52.310	0.378	.57350	52.310
1.433	.57348	.312	1.489	.57353	.308
2.897	.57343	.317	2.950	.57368	.303
4.361	.57338	.321	4.411	.57363	.299
5.822	.57333	.326	5.876	.57368	.294
7.286	.57328	.331	7.341	.57373	.290
8.755	.57323	.335	8.801	.57378	.285
10.221	.57318	.340	10.262	.57383	.281
11.686	.57313	.344	11.719	.57388	.276
13.154	.57308	.349	13.176	.57393	.271
14.619	.57303	.353	14.636	.57398	.267
16.085	.57298	.358	16.097	.57403	.262
17.554	.57293	.362	17.554	.57408	.258
19.022	.57288	.367	19.010	.57413	.253
20.491	.57283	.372	20.471	.57418	.249
21.961	.57278	.376	21.928	.57423	.244
23.426	.57273	.381	23.385	.57428	.240
24.894	.57268	.385	24.841	.57433	.235
26.367	.57263	.390	26.298	.57438	.231
27.837	.57258	.394	27.755	.57443	.226
29.306	.57253	.399	29.211	.57448	.221
30.776	.57248	.404	30.668	.57453	.217
32.249	.57243	.408	32.120	.57458	.212
33.721	.57238	.413	33.573	.57463	.208
35.190	.57233	.417	35.026	.57468	.203
36.664	.57228	.422	36.482	.57473	.199
38.138	.57223	.426	37.939	.57478	.194
39.606	.57218	.431	39.391	.57483	.190
41.079	.57213	.436	40.844	.57488	.185
42.557	.57208	.440	42.296	.57493	.181
44.030	.57203	.445	43.745	.57498	.176
45.502	.57198	.449	45.193	.57503	.172
46.979	.57193	.454	46.646	.57508	.167
48.453	.57188	.459	48.098	.57513	.162
49.926	.57183	.463	49.551	.57518	.158
51.404	.57178	.468	50.999	.57523	.153
52.890	.57173	.472	52.448	.57528	.149
54.366	.57168	.477	53.900	.57533	.144
55.835	.57163	.481	55.349	.57538	.140
57.313	.57158	.486	56.793	.57543	.135
58.790	.57153	.491	58.241	.57548	.131
60.272	.57148	.495	59.690	.57553	.126
61.754	.57143	.500	61.138	.57558	.122
63.230	.57138	.504	62.586	.57563	.117
64.707	.57133	.509	64.031	.57568	.113
66.189	.57128	.514	65.475	.57573	.108
67.670	.57123	.518	66.923	.57578	.104
69.152	.57118	.523	68.372	.57583	.099
70.634	.57113	.527	69.816	.57588	.095
72.110	.57108	.532	71.260	.57593	.090
73.591	.57103	.536	72.705	.57598	.086
75.077	.57098	.541	74.149	.57603	.081
76.599	.57093	.546	75.593	.57608	.077
78.041	.57088	.550	77.034	.57613	.072
79.526	.57083	.555	78.474	.57618	.068
81.012	.57078	.559	79.918	.57623	.063
82.494	.57073	.564	81.362	.57628	.059
83.974	.57068	.569	82.806	.57633	.054
85.459	.57063	.573	84.247	.57638	.050
	.57058	.577		.57643	.045

TABLE 11

CORRECTIONS TO α SCREW READINGS
$(1-4)^{\alpha} + (3-2)^{\alpha}$

K (in units of .001)

If K is Negative - South Stars Positive
North Stars Negative
If K is Positive - South Stars Negative
North Stars Positive

$(1-4)^{\delta}$ Screw + Orient. $(3-2)^{\delta}$ South + North -		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	6	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3
2	12	0	1	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6
3	18	0	1	1	2	2	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9
4	24	1	1	2	2	3	4	4	5	6	6	7	7	8	9	9	10	10	11	12	12
5	30	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14	15	15
6	36	1	2	3	4	5	6	6	7	8	9	10	11	12	13	14	15	16	17	17	18
7	42	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	19	20	21
8	48	1	2	4	5	6	7	9	10	11	12	13	15	16	17	18	20	21	22	23	24
9	54	1	3	4	6	7	8	10	11	12	14	15	17	18	19	21	22	23	25	26	28
10	60	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28	29	31
11	66	2	3	5	7	8	10	12	13	15	17	19	20	22	24	25	27	29	30	32	34
12	72	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	29	31	33	35	37
13	77	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
14	83	2	4	6	9	11	13	15	17	19	21	24	26	28	30	32	34	36	39	41	43
15	89	2	5	7	9	11	14	16	18	21	23	25	28	30	32	34	37	39	41	44	46
16	95	2	5	7	10	12	15	17	20	22	24	27	29	32	34	37	39	42	44	47	49
17	101	3	5	8	10	13	16	18	21	23	26	29	31	34	36	39	42	44	47	49	52
18	107	3	6	8	11	14	17	19	22	25	28	30	33	36	39	41	44	47	50	52	55
19	113	3	6	9	12	15	17	20	23	26	29	32	35	38	41	44	47	49	52	55	58
20	119	3	6	9	12	15	18	21	24	28	31	34	37	40	43	46	49	52	55	58	61
21	125	3	6	10	13	16	19	22	26	29	32	35	39	42	45	48	51	55	58	61	64
22	131	3	7	10	13	17	20	24	27	30	34	37	40	44	47	50	54	57	61	64	67
23	137	4	7	11	14	18	21	25	28	32	35	39	42	46	49	53	56	60	63	67	70
24	143	4	7	11	15	18	22	26	29	33	37	40	44	48	51	55	59	62	66	70	73
25	149	4	8	11	15	19	23	27	31	34	38	42	46	50	54	57	61	65	69	73	77
26	155	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
27	161	4	8	12	17	21	25	29	33	37	41	45	50	54	58	62	66	70	74	78	83
28	167	4	9	13	17	21	26	30	34	39	43	47	51	56	60	64	69	73	77	81	86
29	173	4	9	13	18	22	27	31	36	40	44	49	53	58	62	67	71	75	80	84	89
30	179	5	9	14	18	23	28	32	37	41	46	50	55	60	64	69	73	78	83	87	92
31	185	5	9	14	19	24	28	33	38	43	47	52	57	62	66	71	76	81	85	90	95
32	191	5	10	15	20	24	29	34	39	44	49	54	59	64	69	73	78	83	88	93	98
33	197	5	10	15	20	25	30	35	40	45	50	56	61	66	71	76	81	86	91	96	01
34	203	5	10	16	21	26	31	36	42	47	52	57	62	68	73	78	83	88	94	99	04
35	209	5	11	16	21	27	32	37	43	48	54	59	64	70	75	80	86	91	96	02	07
36	215	6	11	17	22	28	33	39	44	50	55	61	66	72	77	83	88	94	99	05	10
37	221	6	11	17	23	28	34	40	45	51	57	62	68	74	79	85	91	02	02	08	13
38	226	6	12	17	23	29	35	41	47	52	56	64	70	76	81	87	93	99	05	10	16
39	232	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	95	01	07	13	19
40	238	6	12	18	24	31	37	43	49	55	61	67	73	80	86	92	98	04	10	16	22

TABLE 11 B

CORRECTIONS TO α SCREW READINGS
$(1-4)^{\alpha} + (3-2)^{\alpha}$

K (in units of .001)

If K is Negative - South Stars Positive
North Stars Negative
If K is Positive - South Stars Negative
North Stars Positive

$(1-4)^{\delta}$ + $(3-2)^{\delta}$	Screw Orient. South + North -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
,41	244	6	13	19	25	31	38	44	50	56	63	69	75	82	88	94	00	07	13	19	25
42	250	6	13	19	26	32	39	45	51	58	64	71	77	84	90	96	03	09	16	22	29
43	256	7	13	20	26	33	39	46	53	59	66	72	79	86	92	99	05	12	18	25	32
44	262	7	13	20	27	34	40	47	54	61	67	74	81	88	94	01	08	14	21	28	35
45	268	7	14	21	28	34	41	48	55	62	69	76	83	90	96	03	10	17	24	31	38
46	274	7	14	21	28	35	42	49	56	63	70	77	84	92	99	06	13	20	27	34	41
47	280	7	14	22	29	36	43	50	58	65	72	79	86	93	01	08	15	22	29	37	44
48	286	7	15	22	29	37	44	51	59	66	73	81	88	95	03	10	18	25	32	40	47
49	292	7	15	22	30	37	45	52	60	67	75	82	90	97	05	12	20	27	35	42	50
50	298	8	15	23	31	38	46	54	61	69	77	84	92	99	07	15	22	30	38	45	53
51	304	8	16	23	31	39	47	55	62	70	78	86	94	01	09	17	25	33	40	48	56
52	310	8	17	24	32	40	48	56	64	72	80	88	95	03	11	19	27	35	43	51	59
53	316	8	17	24	32	41	49	57	65	73	81	89	97	05	14	22	30	38	46	54	62
54	322	8	17	25	33	41	50	58	66	74	83	91	99	07	16	24	32	40	49	57	65
55	328	8	17	25	34	42	50	59	67	76	84	93	01	09	18	26	35	43	51	60	68
56	334	9	17	26	34	43	51	60	69	77	86	94	03	11	20	29	37	46	54	63	71
57	340	9	17	26	35	44	52	61	70	79	87	96	05	13	22	31	40	48	57	66	74
58	346	9	18	27	36	44	53	62	71	80	89	98	06	15	24	33	42	51	60	69	78
59	352	9	18	27	36	45	54	63	72	81	90	99	08	17	26	35	44	53	63	72	81
60	358	9	18	28	37	46	55	64	73	83	92	01	10	19	29	38	47	56	65	74	84
61	364	9	19	28	37	47	56	65	75	84	93	03	12	21	31	40	49	59	68	77	87
62	370	9	19	28	38	47	57	66	76	85	95	04	14	23	33	42	52	61	71	80	90
63	376	10	19	29	39	48	58	67	77	87	96	06	16	25	35	45	54	64	74	83	93
64	381	10	20	29	39	49	59	69	78	88	98	08	18	27	37	47	57	66	76	86	96
65	387	10	20	30	40	50	60	70	80	90	99	09	19	29	39	49	59	69	79	89	99
66	393	10	20	30	40	51	61	71	81	91	01	11	21	31	41	51	62	72	82	92	02
67	399	10	21	31	41	51	62	72	82	92	03	13	23	33	44	54	64	74	85	95	05
68	405	10	21	31	42	52	62	73	83	94	04	14	25	35	46	56	66	77	87	98	08
69	411	11	21	32	42	53	63	74	84	95	06	16	27	37	48	58	69	79	90	01	11
70	417	11	21	32	43	54	64	75	86	96	07	18	29	39	50	61	71	82	93	04	14
71	423	11	22	33	43	54	65	76	87	98	09	20	30	41	52	63	74	85	96	06	17
72	429	11	22	33	44	55	66	77	88	99	10	21	32	43	54	65	76	87	98	09	20
73	435	11	22	34	45	56	67	78	89	01	12	23	34	45	56	68	79	90	01	12	23
74	441	11	23	34	45	57	68	79	91	02	13	25	36	47	59	70	81	93	04	15	26
75	447	11	23	34	46	57	69	80	92	03	15	26	38	49	61	72	84	95	07	18	30
76	453	12	23	35	47	58	70	81	93	05	16	28	40	51	63	74	86	98	09	21	33
77	459	12	24	35	47	59	71	82	94	06	18	30	41	53	65	77	89	00	12	24	36
78	465	12	24	36	48	60	72	84	95	07	19	31	43	55	67	79	91	03	15	27	39
79	471	12	24	36	48	60	73	85	97	09	21	33	45	57	69	81	93	06	18	30	42
80	477	12	24	37	49	61	73	86	98	10	22	35	47	59	71	84	96	08	20	33	45

TABLE 111

CORRECTIONS TO δ SCREW READINGS

K POS.
SOUTH STARS SAME SIGN AS $(1-4)^{\alpha}$
NORTH STARS OPPOSITE SIGN AS $(1-4)^{\alpha}$

K NEG.
SOUTH STAR OPPOSITE SIGN TO $(1-4)^{\alpha}$
NORTH STAR SAME SIGN AS $(1-4)^{\alpha}$

Unit = $0^{R}.001$

	$(1-4)^{\alpha} + (3-2)^{\alpha}$											
K	2	4	6	8	10	12	14	16	18	20	22	24
.001	0	0	0	0	0	0	1	1	1	1	1	1
2	0	0	0	1	1	1	1	1	1	2	2	2
3	0	0	1	1	1	1	2	2	2	2	3	3
4	0	1	1	1	2	2	2	2	3	3	3	4
5	0	1	1	2	2	2	3	3	3	4	4	5
6	0	1	1	2	2	3	3	4	4	5	5	6
7	1	1	2	2	3	3	4	4	5	5	6	6
8	1	1	2	2	3	4	4	5	6	6	7	7
9	1	1	2	3	3	4	5	6	6	7	8	8
10	1	2	2	3	4	5	5	6	7	8	8	9
11	1	2	3	3	4	5	6	7	8	8	9	10
12	1	2	3	4	5	6	6	7	8	9	10	11
13	1	2	3	4	5	6	7	8	9	10	11	12
14	1	2	3	4	5	6	7	9	10	11	12	13
15	1	2	3	5	6	7	8	9	10	11	13	14
16	1	2	4	5	6	7	9	10	11	12	13	15
17	1	3	4	5	7	8	9	10	12	13	14	16
18	1	3	4	6	7	8	10	11	12	14	15	17
19	1	3	4	6	7	9	10	12	13	15	16	17
20	2	3	5	6	8	9	11	12	14	15	17	18

TABLE 1V

CORRECTION TO δ SCREW FACTOR
Unit = $0''.001$

2D	.000	.001	.002	.003	.004	.005	.006	.007	.008	.009
.000	...	.0002	.0004	.0007	.0009	.0011	.0014	.0016	.0018	.0021
.010	.0023	.0025	.0028	.0030	.0032	.0035	.0037	.0039	.0041	.0044
.020	.0046	.0048	.0051	.0053	.0055	.0058	.0060	.0062	.0065	.0067
.030	.0069	.0072	.0074	.0076	.0079	.0081	.0083	.0085	.0088	.0090
.040	.0092	.0085	.0097	.0099	.0102	.0104	.0106	.0109	.0111	.0113

Screw factor is 12.1089
Correction is opposite sign to 2D correction.

GENERAL

Acknowledgement is here made to Dr. H. R. Morgan of the United States Naval Observatory for his courtesy in supplying the best available positions for our list of stars, based on the FK3 system. Meridian circle observations of them were started in Ottawa in 1951 and continued through 1953. P.Z.T. results for 1952 were thus required to smooth the star list internally both in R.A. and in Declination. In the former the greatest divergence in position was of the order of 0·2 second of time, while in declination it was 1·0 second of arc. Stars which exhibited a large deviation were not used for time or latitude determinations during 1952, but their residuals were applied to the catalogue positions to make them useful for 1953. In fact the residuals for each star were considered as corrections to catalogue, and applied before the catalogue was used the second year.

In July 1952 the star list was divided into 12 two-hour groups with approximately 12 stars per group and an even weighting of north and south stars. A few changes were made in the list to provide a fairly uniform distribution and to replace the few that proved to be too faint or too bright. Useful magnitudes lie between 5th and 9th.

Two groups normally constitute a night's work, yielding about 24 stars if complete. At the summer solstice an interval of 7 hours is the maximum available from civil twilight to civil twilight. At winter solstice the interval is about 14 hours. Star groups 10 to 3, observed between July and December, thus remain in observation longer than groups 4 to 9 which are observed between January and June.

The first observations were taken in September 1951, and the next few months were considered as an experimental period, in order to become familiar with an entirely new procedure of observing and computing. Mr. Paul Sollenberger of the United States Naval Observatory very kindly placed his experience at our disposal in isolating the various sources of difficulty. Observations with the broken Cooke Transit for time were carried on to the beginning of 1952 when it became clear that the observations with the P.Z.T. were giving a better determination of time than the previous method of observing. All the early errors in method and computing have been corrected and in some cases the plates were remeasured.

The photographic plate used in the Ottawa P.Z.T. program is blue sensitive Kodak 103–0 and may be handled conveniently in the light of a red filter Wratten Series 2. It is ordered to size $2\frac{3}{32}$ inches square. D-19 developer at 68° F with 4 minutes of development time provides adequate images. A small tank designed for the development of 35 mm film is used, together with a U-shaped stainless steel clip which holds the plate in a horizontal position about a quarter of an inch from the base of the tank.

No fogging of the plate due to city lights is noticeable during the half hour or more of total exposure time. Direct moonlight is screened from the lens by a moon shade which is mounted horizontally about 3 feet above the P.Z.T. On moonlit nights some fogging does occur due to haze and also due to any clouds which might drift over during an exposure.

Normal vibrations, due to traffic on nearby Carling Avenue, and around the Observatory building, seem to have little effect on the steadiness of the star image. Observing carried on with the 6-inch meridian instrument in the adjacent room, and operation of

the fan in the P.Z.T. room to reduce the temperature differential between inside and outside the building, have no detrimental effect on stellar images. The west end of the Observatory, which houses the transit instruments is made of the same solid stone and masonry as the remainder of the building. Care is taken to have the observing room opened as much as possible to the outside air but a temperature difference of less than two degrees centigrade is seldom attained.

REFERENCES

1. Special Publication No. 7, United States Coast and Geodetic Survey, 1915.
2. A. J. *40*, 7, 1929; A. J. *43*, 9, 1933.
3. Contributions Dom. Obs. Vol. 2, No. 18, 1954.

Method and Formulae Used in P.Z.T. Plate Measurement

BY

R. W. TANNER

SKY COORDINATES

In the tangent plane to the celestial sphere at the zenith, take the zenith as origin with the positive x direction to the east and the positive y direction to the south (Figure 15). A star at α, δ, has rectangular coordinates in seconds of arc

$$x = -\ 15\ hr \cos \delta$$
$$y = -\ (Z + k\ r^2 h^2)$$

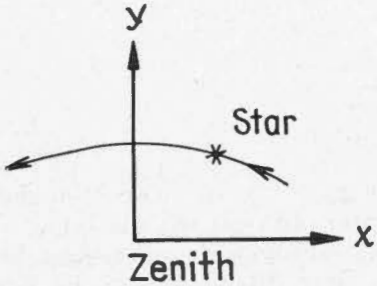


FIG. 15

where h is the star's west hour angle in seconds of mean solar time; Z is the north zenith distance in seconds of arc; r = 1·0027379 is the conversion to give the number of sidereal seconds in a mean solar interval; k, the curvature factor, has the value $2 \cdot 727 \times 10^{-4}$ for the latitude of Ottawa (φ). It follows that $Z = \delta - \varphi$. These expressions for x and y are the true coordinates. Measured distances are affected by refraction and must be increased by 1·000286 in the photographic range to obtain true distances. However, the scale factor for conversion from millimeters to seconds is determined from the plate itself and includes this factor.

PLATE COORDINATES

The telescope projects the image of this coordinate system into its focal plane. Figure 16 indicates the view as seen from below. x z y represent the coordinate plane while S E N W are the directions with respect to the ground.

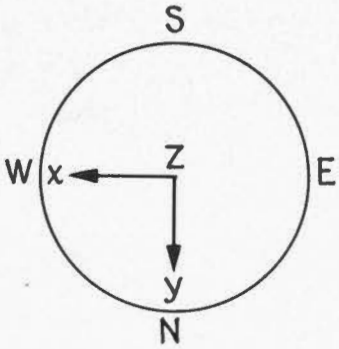


FIG. 16

The photographic plate presents itself to this image in two aspects, A and B. The plate holder supplies an identifying "v" on the emulsion on the (ground) north edge with the head west, which is the direction of the rotary when loading. The two aspects are shown in Figure 17. In rotating, the head goes through north to reach east, and returns through north.

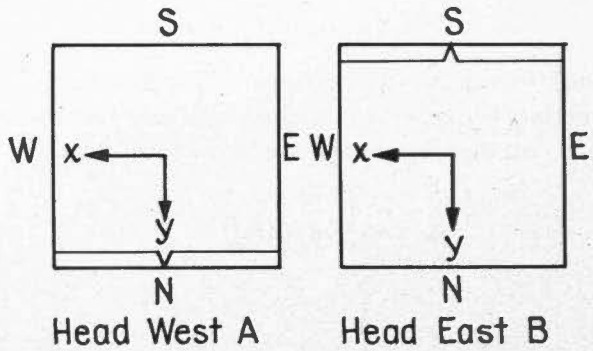


FIG. 17

In aspect A, head west, the plate travels away from the head, i.e., from west to east; in B, head east, it returns to the head over the same path. At fixed points in the path signals are given, and the mechanism and optics of the telescope are such that at corresponding signal instants on either path, the plate is in one of two positions differing by 180° due to rotation about the image of the zenith. A set of exposures A_1 B_2 A_3 B_4 constitutes a head west cycle; B_1 A_2 B_3 A_4 a head east cycle.

Assuming at first that the direction of motion of the plate is truly east and west in both aspects (no azimuth or rotation error), choose a coordinate system X O Y fixed to the plate, coinciding with the x z y system at one of the A signals. At the corresponding B signal X and x will have opposite signs, as also will Y and y. Hence for head west initial exposure:—

$$X_1 = x_1 \qquad Y_1 = y_1 \qquad X_2 = -x_2 \qquad Y_2 = -y_2$$
$$X_3 = x_3 \qquad Y_3 = y_3 \qquad X_4 = -x_4 \qquad Y_4 = -y_4$$

The star image moves east or west with respect to the plate at the rate $15\,r(\cos\delta_0 - \cos\delta)$ per second of time where δ_0 is the declination for which the plate speed is correct. For a 20-second exposure, and a 15′ difference between δ_0 and δ this motion is less than one second of arc (approximately 0″.9). The star image also moves north and south with respect to the plate at the rate of $2kr^2h''$ per second of time because of its curved path. During a 20-second exposure at an extreme hour angle of 60 seconds, this motion is also less than a second of arc (approximately 0″.7). These motions are smaller than seeing displacements and the images may be treated as instantaneous exposures at the signal instant.

TIMING

An interval timer measures the fraction of a second from the telescope signal to the next clock second. If these intervals are p and q for the aspects A and B, and T_1 is the whole second immediately following the mean of the first exposure, the instantaneous exposures occur at:—

head west	head east
$T_1 - p$	$T_1 - q$
$T_1 + 30 - q$	$T_1 + 30 - p$
$T_1 + 60 - p$	$T_1 + 60 - q$
$T_1 + 90 - q$	$T_1 + 90 - p$

The central time of a transit is hence $T_0 = T_1 + 45 - (p+q)/2$.

If s be defined as $s=(p-q)/2$, then the four exposure times for head west are:—

$$T_0-45-s \qquad T_0+15-s \qquad (1)$$
$$T_0-15+s \qquad T_0+45+s$$

For head east, s takes the opposite sign.

Since $h=T+\Delta T-\alpha$, where T is time by the observatory clock, and if by definition $h_0=T_0+\Delta T-\alpha$ then the four hour angles may be expressed for head west as:—

$$h_1=h_0-45-s \qquad h_3=h_0+15-s \qquad (2)$$
$$h_2=h_0-15+s \qquad h_4=h_0+45+s$$

with opposite sign of s for head east.

IDEAL REDUCTION

(a) *Scale*

The sum $(X_1-X_2-X_3+X_4)$ (head west), is equal to $(x_1+x_2-x_3-x_4)$. With values of h from (1) and (2) the result is:—

$$X_1-X_2-X_3+X_4=1800\ r\cos\delta \qquad (3)$$

with opposite sign for head east. When δ is known, this gives the scale of the plate in seconds of arc per revolution of the measuring screw.

(b) *Clock Correction.*

The sum $(-X_1+X_2-X_3+X_4)$ for head west is equal to

$$(-x_1-x_2-x_3-x_4)=60\ r\ h_0\cos\delta$$

or

$$h_0=(-X_1+X_2-X_3+X_4)/(60\ r\cos\delta). \qquad (4)$$

The scale being known from (3), this gives h_0 in seconds of time.
Then ΔT the clock correction is:—

$$\Delta T=h_0+\alpha-T_0 \qquad (5)$$

T_0 being defined as above.

(c) *Zenith Distance*

The sum

$$(-Y_1+Y_2-Y_3+Y_4)=(-y_1-y_2-y_3-y_4)\ \text{(for head west)}$$
$$=4Z+kr^2(h_1^2+h_2^2+h_3^2+h_4^2).$$

The second term of the last member is the reduction to the meridian.
For $h_0=0$ it amounts to $1''.23$. Hence

$$Z+''.31=(-Y_1+Y_2-Y_3+Y_4)/4 \qquad (6)$$

whence $\varphi=\delta-Z$ or $\delta=\varphi+Z$.

AZIMUTH AND ROTATION ERRORS

Suppose in aspect A the actual direction of motion of the plate makes a small angle ϵ with the image of the prime vertical. If the exposures were truly instantaneous this would be of no consequence. For ϵ small enough to replace the cosine by unity and the tangent by the angle, there is evidently no effect on the X coordinate. The effect on the Y coordinate for a 20-second exposure is $(300\ r\cos\varphi)\ \epsilon$, about $(200'')\ \epsilon$. Hence even for $\epsilon = 10'$, $(3\times10^{-3}$ radians), $(200'')\,\epsilon = 0''.6$, which is the same order as the curvature

mentioned in section 2 above. In practice, ϵ is readily reduced to a value less than 10′. Further it is seen that if all four exposures are uniform during the 20 seconds, the mean positions of the images will be independent of ϵ.

If, in rotation to the B aspect, the angle turned differs from 180° by η, errors in X and Y occur of amounts ηY and ηX respectively. Since η is held to 5″ or less, ($2 \cdot 4 \times 10^{-5}$ radians), the effect reaches 0″.02 only at the edge of the plate where Y becomes 900″, and so is neglected.

ACTUAL MEASURES

The actual measures are made with the two screws of a measuring machine which together constitute another coordinate system X′O′Y′ which closely approximates the ideal one. O′ represents the origin of each screw. Let i_x be the angle between the positive directions of OX and O′X′ and i_y be the angle between OY and O′Y′, in the positive sense

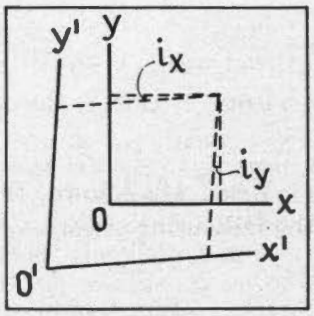


FIG. 18

as shown in Figure 18. Further, let the scale of the X′ screw in seconds of arc be S''_α per revolution, including refraction, and the scale of the Y′ screw be S''_δ per revolution. It is assumed that the plate is always adjusted in the measuring machine with the prime vertical as nearly as possible coincident with the O′X′ axis. The value ($i_x + i_y$) is known from auxiliary measurements. i_x is determined by the measures themselves. Both are sufficiently small to replace the sine by the angle and the cosine by unity. The relation between the two coordinate systems is:—

$$(X'-X'_0)S''_\alpha = +X - Yi_y \qquad (7)$$
$$(Y'-Y'_0)S''_\delta = +Y - Xi_x$$

where X'_0 Y'_0 are the coordinates of O with respect to O′. The measured coordinates are in revolutions; the ideal ones are in seconds of arc; i_x and i_y are in radians. The subsequent discussion will assume head west only, head east involving a change in sign of the measures.

Scale

The measured sum

$$(X'_1-X'_2-X'_3+X'_4) = \{(X_1-X_2-X_3+X_4) - i_y(Y_1-Y_2-Y_3+Y_4)\}/S''_\alpha$$

The coefficient of $-i_y$ is

$$y_1+y_2-y_3-y_4 = -kr^2(h_1^2+h_2^2-h_3^2-h_4^2)$$
$$= 240h_0kr^2 \qquad (8)$$

which vanishes for a symmetrical set of exposures, ($h_0=0$), and is small in any case. Its product with i_y is therefore negligible. Hence, from (3) it follows:—

$$S''_\alpha = 1800 \text{ r} \cos \delta/(X'_1-X'_2-X'_3+X'_4) \qquad (9)$$

gives the scale factor to reduce the measured X′ quantities to seconds of arc. The ratio S''_α/S''_δ is independently determined, so that S''_δ may also be regarded as known.

Inclination

The angle i_x between the α screw and the prime vertical is found as follows: The measured sum

$$(Y'_1-Y'_2-Y'_3+Y'_4)=\{(Y_1-Y_2-Y_3+Y_4)-i_x(X_1-X_2-X_3+X_4)\}/S''_\delta$$

The right hand member with the aid of (3) and (8),:—

$$=(240\ h_0kr^2-i_x\ 1800\ r\cos\delta)/S''_\delta$$

With negligible error i_x may conveniently be expressed in terms of measured quantities as:—

$$i_x=\frac{4krsec\,\delta(-X'_1+X'_2-X'_3+X'_4)-(S''_\delta/S''_\alpha)(Y'_1-Y'_2-Y'_3+Y'_4)}{(X'_1-X'_2-X'_3+X'_4)}$$

The first term of the numerator in the right hand member, involving the skew and curvature, is a small corrective term. 4kr sec δ is taken as 4kr sec $\varphi=1\cdot56\times10^{-3}$. Also 1800r cos φ in revolutions is used for the denominator, since all the stars in the plate are used to obtain an average value of i_x. i_y follows since (i_x+i_y) is known from auxiliary measures. In practice i_x is determined with the following expression:—

$$i_x=\frac{S''_\delta}{1800\ r\cos\varphi}\frac{1}{n}\sum^{n}\{(S''_\alpha/S''_\delta)4kr\sec\varphi(-X'_1+X'_2-X'_3+X'_4)-(Y'_1-Y'_2-Y'_3+Y'_4)\}$$

where n is the number of stars.
It will be noted that

$$(S''_\alpha/S''_\delta)4kr\sec\varphi(-X'_1+X'_2-X'_3+X'_4)=\cdot00078(-X'_1+X'_2-X'_3+X'_4)$$
$$=\zeta,$$

which is the quantity referred to on page 333.

Zenith Distance

The measured sum

$$(-Y'_1+Y'_2-Y'_3+Y'_4)=(1/S''_\delta)\{(-Y_1+Y_2-Y_3+Y_4)-i_x(-X_1+X_2-X_3+X_4)\}$$
$$=(1/S''_\delta)\{(4Z+1''.23)-i_x(60r\cos\delta)h_0\}$$

whence

$$(Z+0''.31)=(S''_\delta/4)\{(-Y'_1+Y'_2-Y'_3+Y'_4)+(S''_\alpha/S''_\delta)i_x(-X'_1+X'_2-X'_3+X'_4)\}$$

Clock Correction.

The measured sum (the skew)

$$(-X'_1+X'_2-X'_3+X'_4)=(1/S''_\alpha)\{(-X_1+X_2-X_3+X_4)-i_y(-Y_1+Y_2-Y_3+Y_4)\}$$

The first half of the right hand member is (60 r cos δ)h_0, while the coefficient of $-i_y$ is 4Z. Hence:—

$$h_0=(S''_\alpha/60r\cos\delta)\{(-X'_1+X'_2-X'_3+X'_4)+(S''_\delta/S''_\alpha)i_y(-Y'_1+Y'_2-Y'_3+Y'_4)\}\qquad(10)$$

Check Sum

It may be noted that the measured sum $(X'_1+X'_2-X'_3-X'_4)$ should vanish, as it involves only products of small terms. The residual gives an indication of the dispersion due to "seeing" and errors of measurement.

A Program Machine for Automatic Operation of the Ottawa P.Z.T.

BY

V. E. HOLLINSWORTH

ABSTRACT

A program tape mechanism is described which uses exposed 35 mm film perforated to operate a number of contacts at definite time periods when driven by a synchronous motor. Contact operating times are observable on a clock which is geared to the tape drive. An operating period of 17 hours is obtainable with a 1000-foot reel of film and the accuracy of contacts at this rate is better than $\pm$ 0·5 seconds.

INTRODUCTION

When the Ottawa P.Z.T. was first placed in service its operation required the close attention of an astronomer to start and stop the photographic mechanism at the correct instant in accordance with the program of stars to be photographed. This was tedious work over a period of many hours and was subject to errors and omissions as a consequence. Therefore a device which would perform these duties automatically was considered desirable and as a result the Program Machine described below was designed and constructed at the Dominion Observatory and placed in operation in December 1952.

Figure 19 gives a general view of the equipment. It will be seen that a frame or chassis supports two reels which contain the perforated film. A standard 16-tooth sprocket, driven through two gears by a Bodine synchronous motor, is used to pull the film under the contacts. Take up of film is provided by rotation of the left hand reel in an anti-clockwise direction by means of a steel spring belt. A similar belt is used on the right hand wheel to act as a brake. The film is rewound by turning the crank on the shaft of another 16-tooth sprocket, shown at the right, after interchanging the two belts.

The contact assembly and the punch for perforating the film may be seen on the top of the chassis. The die into which the punch is pressed is a permanent part of the bed plate. When it is not used for perforating the fim it forms recesses into which the 4 spring contact fingers may drop after passing through the holes in the film, thereby permitting greater separation of the contacts than would be the case if the film thickness alone were used for this purpose. The contact points are pure silver and are readily adjusted by turning the horizontal screws in or out as required. The tubular caps which cover the screw heads serve as lock nuts.

An essential part of the machine is the clock. Its sweep second shaft is coupled to the 1 r.p.m. output shaft of the synchronous motor through a clutch. The film drive sprocket is also connected to this same motor shaft through two 48-pitch gears having 180 and 96 teeth. It will therefore be seen that the film drive and the clock are tied together so that any point on the film is represented by a time indication on the clock. With the motor de-clutched the film may be cranked backward or forward and the clock hands will follow exactly.

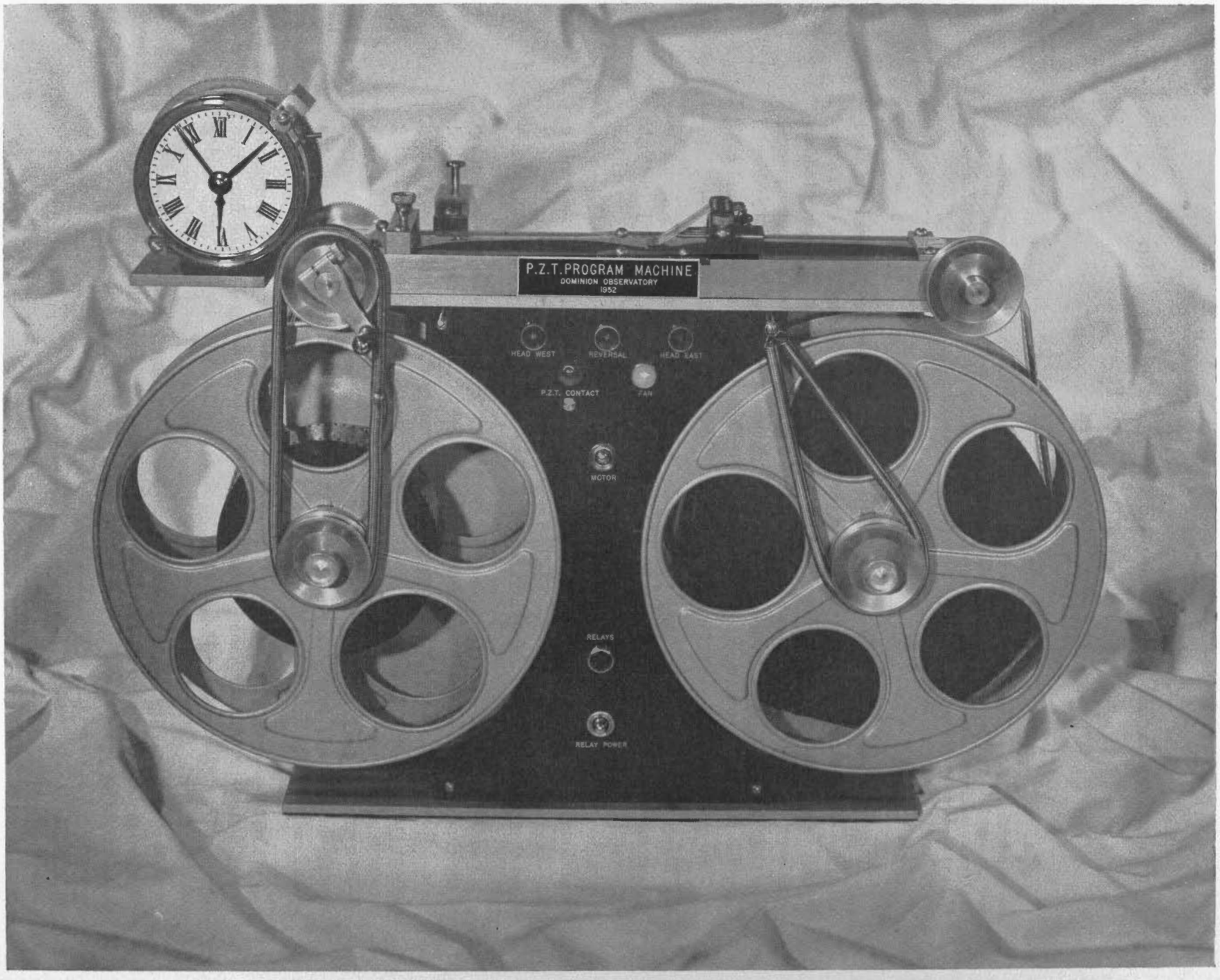


FIG. 19. Front view of P.Z.T. Program Machine.
The punched tape is made of movie film. Sprocket and gear connection to the clock provide positive timing. Pilot lights indicate the various operations of the P.Z.T.

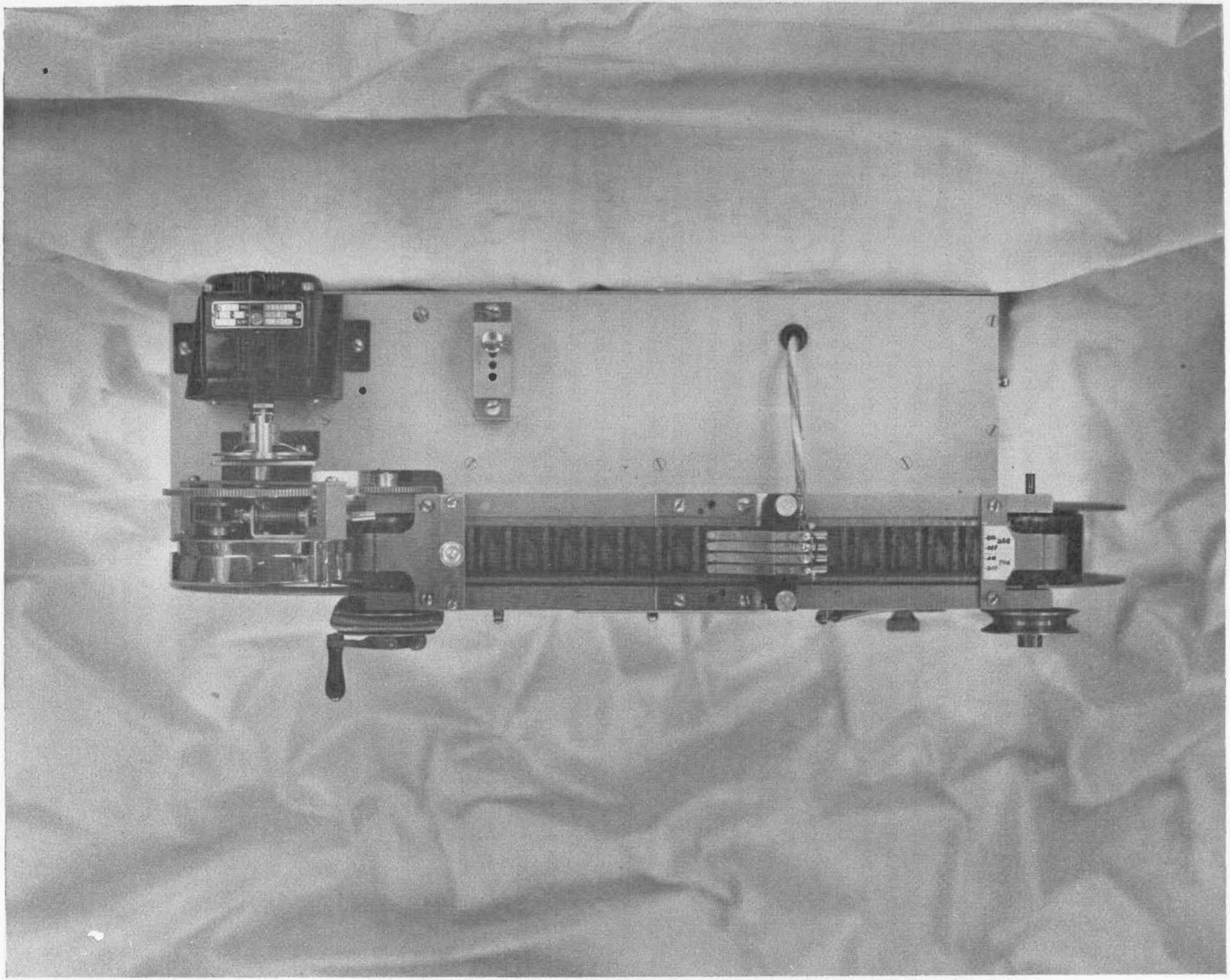


FIG. 20. Top view of P.Z.T. Program Machine.
The synchronous motor is connected to the clock by means of a clutch. To the right of the motor rests the punch. When the contact arms are lifted clear, the punch fits into the dowelled location visible at the end of the arms, and is used to punch properly spaced sequence holes in the film.

The gear ratio chosen advances the film one sprocket hole every two seconds or at the rate of 56¼ feet per hour. The clutch was installed so that the motor could be uncoupled to permit rewinding of the film and to facilitate the initial setting of the clock to correct time each time the machine is used. By applying a reasonable finger pressure to the gears, and thereby slipping the clutch, the clock, and film, may be advanced or retarded for exact synchronization with true time without uncoupling the motor.

For the automatic operation of the P.Z.T. four contacts are required. Two are used to start and stop the sequence of events necessary to take four exposures of a star and two operate the fan which ventilates the telescope tube.

Since the contacts close only momentarily, while the holes in the tape pass under them, relays which will prolong the operation are required. Two polar (magnetized) relays each having two coils were found ideal for this purpose. The contacts on these remain set in the position to which they were moved, by current in one coil, until moved in the opposite direction by current in the other coil. Thus the sequence "start" contact activates the relay momentarily but this remains in the operating position until reversed by the "stop" contact. The fan is operated in a similar manner.

The relays are mounted inside the chassis and power for operating them is obtained by rectifying the output of a 12-volt transformer. Pilot lights are installed on the front panel to indicate that the remotely operated equipment is functioning. Four toggle switches allow manual operation if desired as well as control of power to relays and motor.

Since the P.Z.T. is operated on sidereal or star time rather than on mean time the motor has to be supplied with a frequency of 60 cycles per sidereal second. This is available from amplifiers at the Dominion Observatory which are operated through mean time to sidereal time converters. The mean time is obtained from the crystal controlled master clocks. Hence the derived sidereal time has a very high order of accuracy. Therefore once the tape and clock are properly set the equipment controlled by it will operate on the exact second for long periods of time.

Two reels of film are all that are required for a whole year's star program of 24 hours since one alone will run for more than 12 hours.

Actual operation of the P.Z.T. by this equipment has proved that it is a reliable and useful device in this application and the astronomers have been relieved of an onerous task.

CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

VOLUME XV No. 5

A PROJECTION TYPE MEASURING ENGINE FOR PHOTOGRATHIC ZENITH TELESCOPE PLATES

BY

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EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1956

600-1956

A Projection Type Measuring Engine for Photographic Zenith Telescope Plates

BY

M. M. Thomson

ABSTRACT

A new measuring machine of projection type, designed for scaling PZT plates, has been built at the Dominion Observatory, Ottawa. The stellar images and micrometer readings are focussed on a ground glass viewing screen where the fiducial lines are drawn. The improvements arise from ease of operation, slightly reduced setting error, and reduction in fatigue.

INTRODUCTION

When the new Ottawa Photographic Zenith Telescope was placed in operation in 1951, the only measuring machine available was a Toepfer (Figure 1), designed as a spectrum comparator. In this machine the plate is carried in a box slide, the motion of which is controlled by a half-millimeter pitch screw. The eyepiece containing the fiducial cross hairs is mounted on a slide at right angles to the plate slide, about 8 inches above it, and is actuated by a one-millimeter pitch screw. Drawbacks inherent in the Toepfer engine evolve from:

a) The fiducial lines in the eyepiece tend to change position on refocussing, or due to a jarring. A parallax uncertainty is difficult to remove.

b) The main eyepiece and the magnifiers associated with the divided heads of the two screws provide in effect three optical systems of different accommodation.

c) The moving stages, being an appreciable distance apart give rise to some doubts about the over all stability of the machine.

d) The illumination of the Toepfer was intended for spectrum plates in which the spectra covered a strip about $\frac{1}{4} \times 3$ inches. The wider field of the PZT plates could be illuminated to the edge of the field only by the addition of a diffusion screen, and even then but poorly.

In the design of the new engine certain definite objectives were sought. As much as possible, visual microscopes would give way to projections, thus minimizing eye strain. Measurements in both coordinates must be made accurately and easily. A seven times enlargement of stellar images was considered adequate. The completed engine should have as good an appearance as possible. The decision to use projection, eliminating the use of visual microscopes, arose from the success of previous developments using this principle at both Victoria and Ottawa, (J. RASC **42**, 226, 1948, and J. RASC **45**, 199, 1951).

64652—2

Figure 1.—The Toepfer measuring engine formerly used to scale the PZT plates.

GENERAL DESCRIPTION

Figures 2 and 3 show the engine in its final form. It is of welded steel framework covered with sheet metal and painted a glossy blue-grey. In maximum dimensions it is 57½ inches high, 30 inches wide, and 32 inches deep. At a height of 27½ inches, the side panels terminate in arm rests, above which the engine is 22 inches wide. A 14 × 14 inch ground glass viewing screen, tilted at 45 degrees, receives the projected images of the PZT plate and the scale readings which are viewed by transmitted light. The PZT plate, as indicated in Figure 3 and subsequently, is mounted horizontally on moving stages which define the coordinate axes. The moving stages are in turn mounted on a

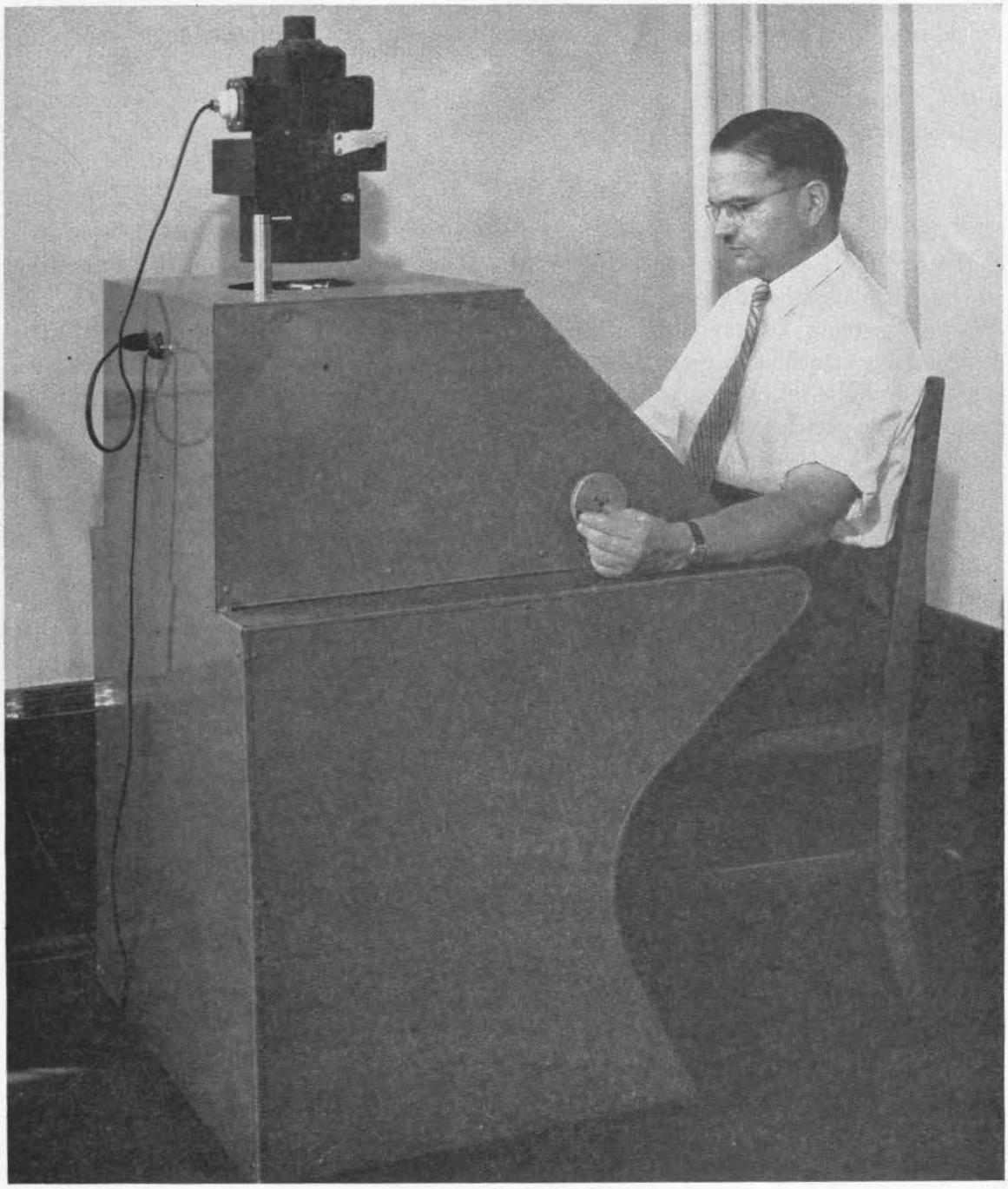


Figure 2.—The new plate measuring engine in operation. A detachable supply cord plugs into a wall outlet, and feeds directly to the toggle switch along side. To the other side of the supply cord is the plug for the mercury vapour lamp in the Omega enlarger head. In order to mount the lamp horizontally in the head, a socket was attached to the back ventilator, and the hole in the top was capped over.

base plate which is firmly attached to the frame of the instrument. The projections are all directed downward to a mirror from which they are reflected upward and forward to the viewing screen. Due to the stability of the instrument frame it is possible to draw the fiducial cross lines directly on the ground glass with India ink, thus eliminating parallax. Two knobs, located one on each side, 3 inches above the arm rest, control the motion of the precision screws. The four feet on which the engine rests are adjustable to provide for levelling.

PROJECTION SYSTEMS

There are three projection systems in the machine, one for the plate and one for each of the two precision screw heads (Figure 3). Illumination for the plate is provided by an Omega enlarger head in which the 40-watt tungsten lamp has been replaced by a G.E. 100-watt mercury vapour lamp type H100-A4. Horizontal mounting of the lamp is provided by attaching a receptacle to the back ventilator of the head. To the head is attached a special bracket with a half-inch boring down one corner permitting it to be mounted to a vertical post rigidly attached to the reinforced top plate of the engine body. A shoulder on the post holds the head 2 inches above the PZT plate, providing excellent illumination. Access to the plate is obtained by swinging the head around on its vertical pivot.

The monochromatic light from the mercury lamp has so small a percentage of red rays that the heating effect in the beam path is negligible. The heat absorbing filter was left in, though it perhaps has little to do. The illumination is sufficiently strong so that there is no need to subdue normal room lighting. Indeed a thin filter of onion skin or drafting paper, in the normal location above the condensers, is desirable for a particularly clear plate.

The projection lens first used in the optical path of the plate was a Kodak Enlarging Ektanon lens which is designed to give good definition over a wide angle. A lens of this character is not absolutely essential, since in the scaling of the plate each stellar image is brought to the intersection of the fiducial lines, and hence is close to the centre of the field. However for examining the plate and comparing stellar images, it seemed desirable to have good wide field projection. The lens is attached to a special piece of brass tubing, about an inch and a half long, threaded internally and externally. The tubing is threaded into the base plate of the moving stages directly below the plate, and exact focussing is accomplished by turning it up or down the required amount.

Focus adjustment is done with the back cover of the engine removed and requires a second person or the use of a mirror held over the viewing screen. Once adjusted, the focus holds, so that it was not considered necessary to provide a means of adjusting from the operator's position. The light path from the emulsion to the viewing screen is 32 inches so that with a 4-inch lens the images are enlarged 7 times. Also the stellar field is completely in view when centrally projected.

Subsequently a 2-inch enlarging lens was installed providing a 15 times enlargement. No inconvenience has been experienced by not being able to view the whole field, while on the other hand the accuracy of setting is somewhat improved. The 2-inch lens, after its iris adjustment ring was removed and the iris left wide open, was fitted with an

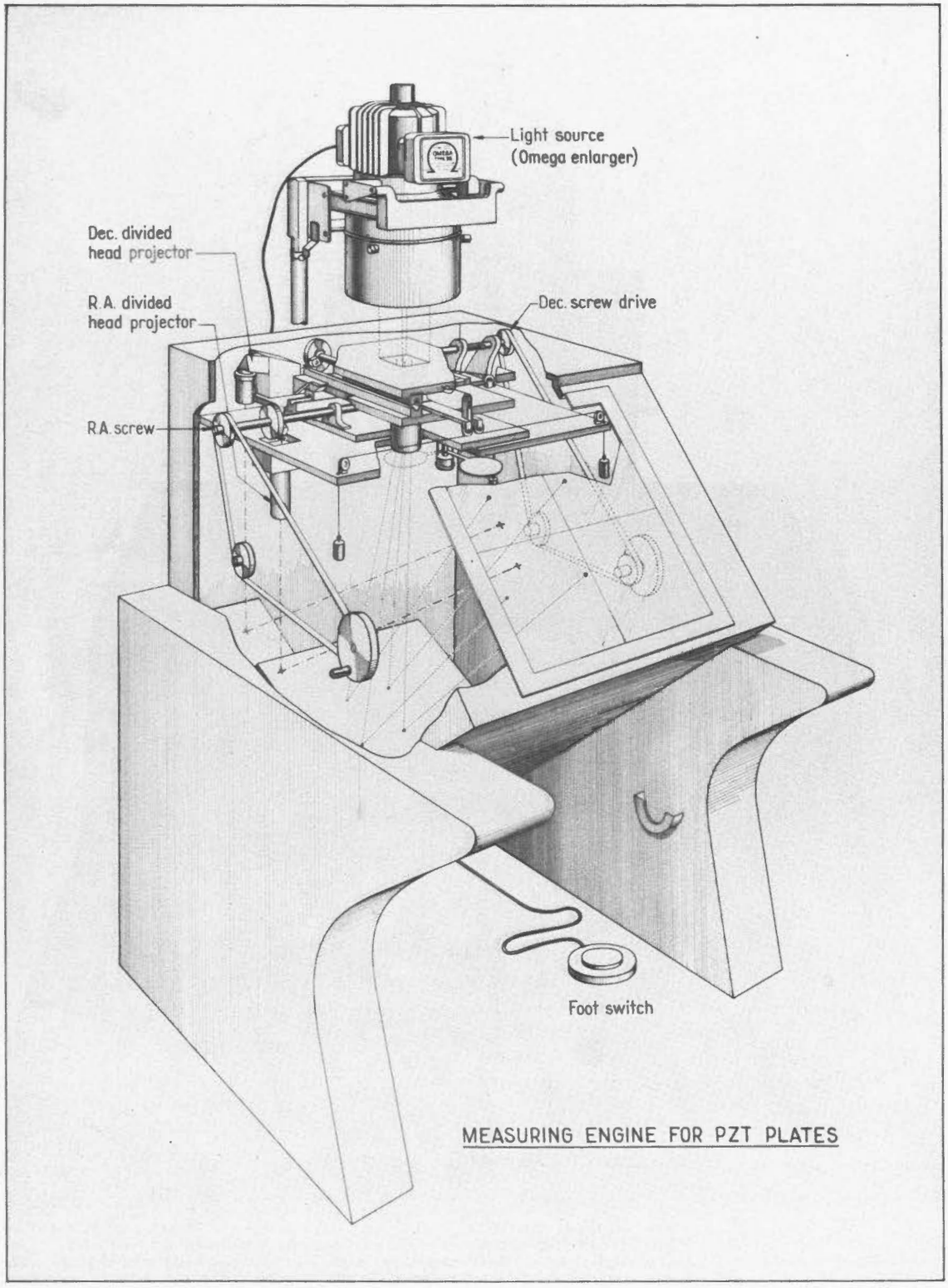


Figure 3.—The new projection measuring engine for scaling PZT plates. A frame of welded steel is covered with sheet metal and painted a grey-blue. Through an opening in the top the photographic plate is mounted horizontally on the upper moving stage. Control knobs, symmetrically located on each side 3 inches above the arm rests, drive the plate in both coordinates and serve to centre each stellar image on to the intersection of the fiducial lines. The foot switch, when not in use, may be kept in its holder.

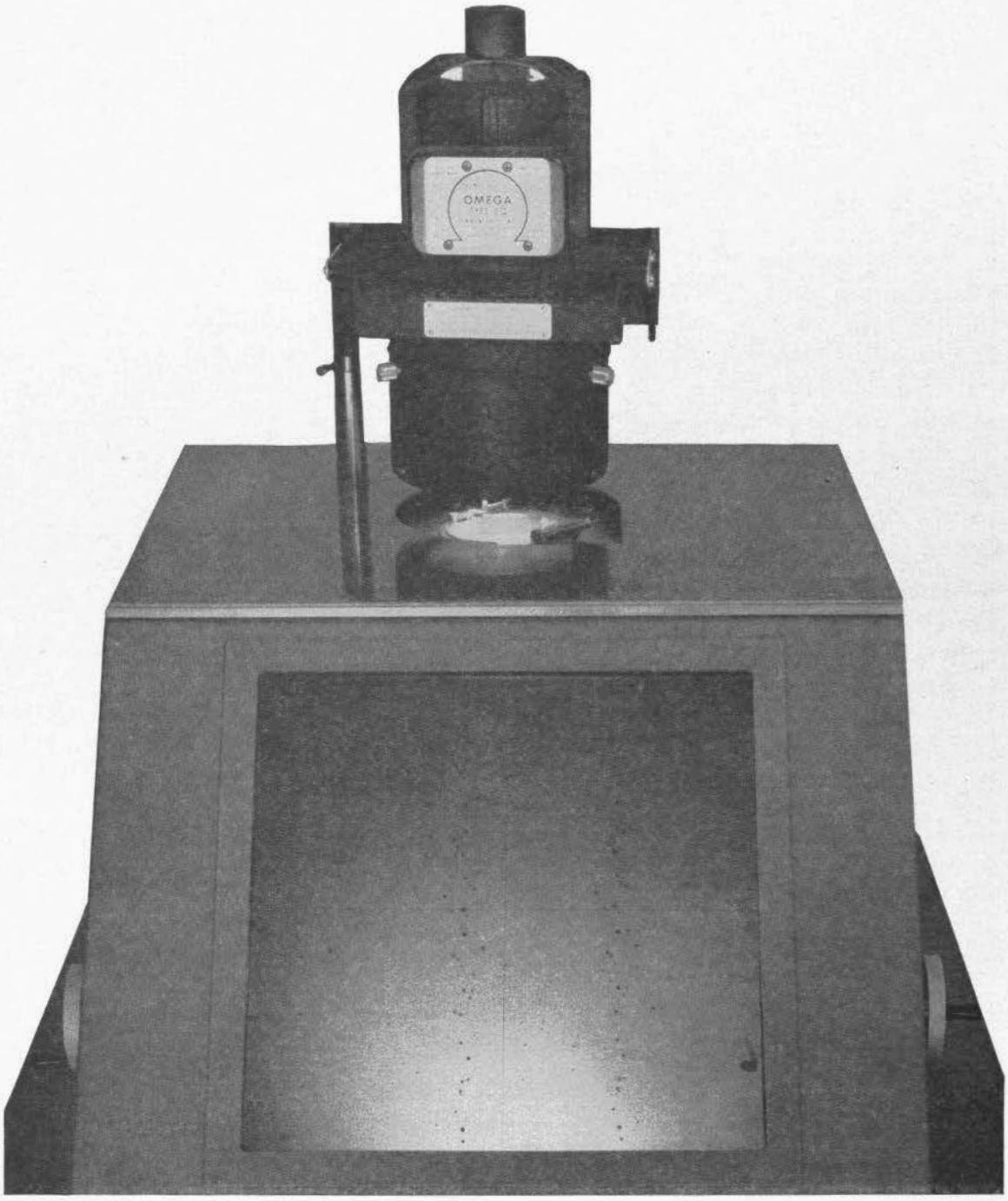


Figure 4.—Ground glass viewing screen of measuring engine shows the stars of a PZT plate after projection with a 4-inch projection lens giving 7 times enlargement. The four images of several stars may be easily noted. Each stellar image is brought to the intersection of the fiducial lines which are drawn on the ground glass. The camera was looking into the lower part of the screen, making the rest of the field dark. Note the Omega enlarger head with its special mounting bracket.

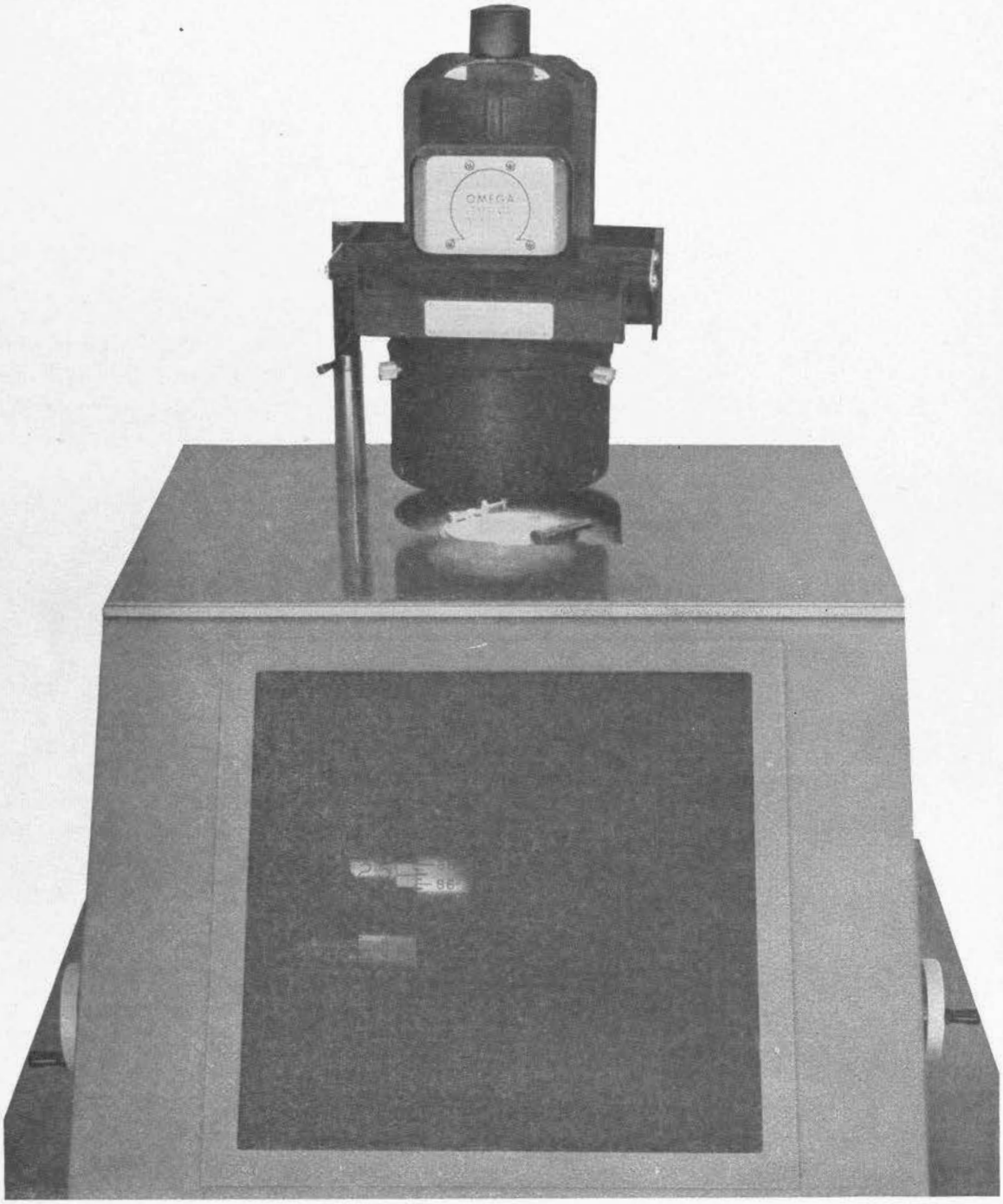


Figure 5.—Screw settings are projected onto the ground glass and simultaneously the star pattern is occulted by the operation of a foot switch. (Occulting the star pattern is not necessary, and has been discontinued.) The camera is in the line of sight of only one scale projection. In practice both scales may be read easily.

adapter into the top of the threaded tubing and focussed as before. The 2-inch lens projects up into the opening in the lower moving stage, requiring that the original 2 × 2-inch opening be lengthened.

The mirror, a 10 × 10-inch sheet of plate glass, selected for its smoothness and aluminized on its front surface, is mounted at an angle of 22½ degrees to the horizontal. The projected image of the star images of a plate made with the 4-inch projection lens is shown in Figure 4.

The projector for the lower screw head (R.A. screw of Figure 3) is mounted on the base plate of the moving stages as seen in Figures 6 to 9. Illumination is provided by a 6-volt, 21-candle power automobile lamp housed in a metal box whose inside walls are painted a glossy white. The light is further diffused by a piece of ground glass across the opening, thus giving a uniform band of illumination across the divided head and veeder counter. The direct reflection of this illumination points down the projection tube to a lens of about 6 inches focal length which is adequate to give an image of about 4 times enlargement on the screen. A coated lens of ordinary quality was used and the resulting image is very good.

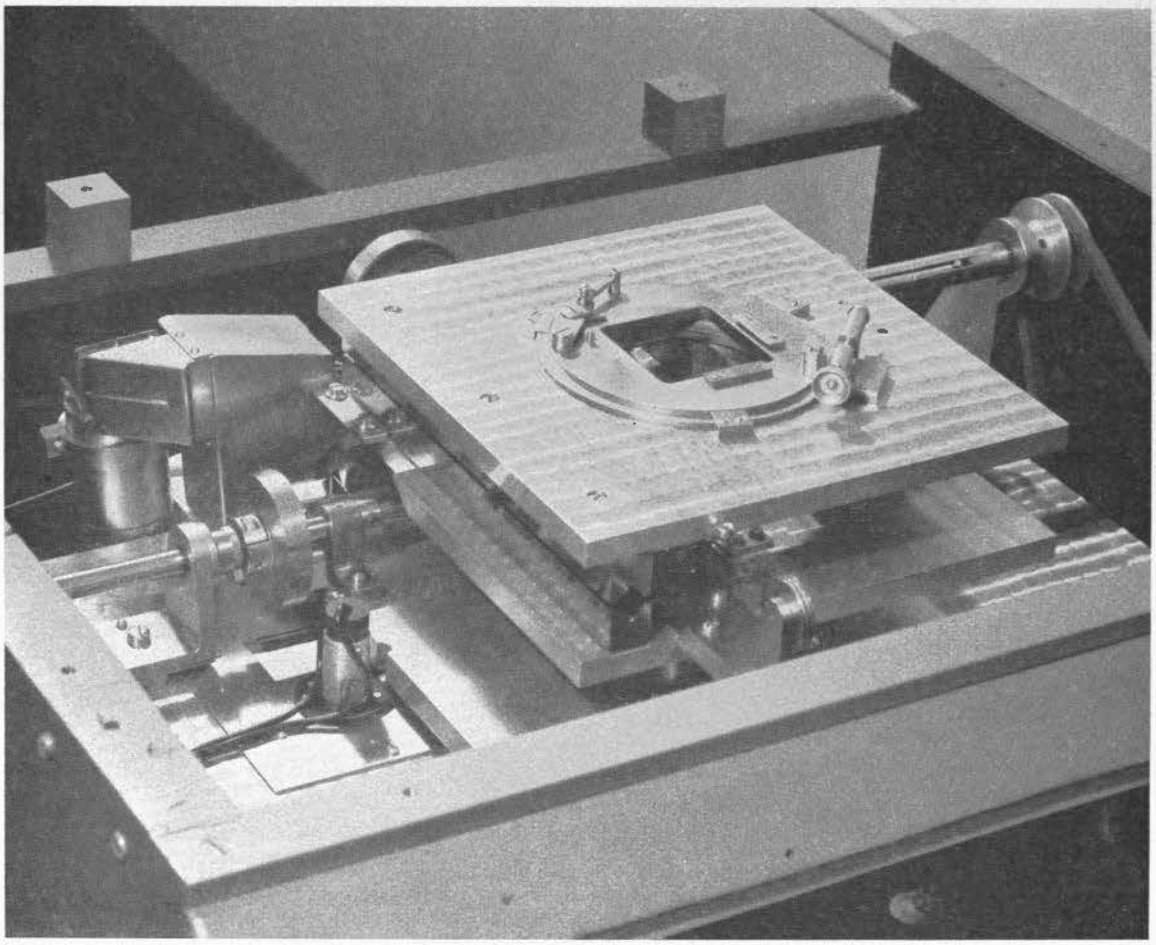


Figure 6.—With the top of the engine removed the general arrangement of the mechanical parts is exposed. The plate is mounted, emulsion down, by means of the toggle clamp (left) and the fixed stops (right) attached to the disc set into the top stage. Three fingers bear lightly on the disc. A projecting finger impelled by a tangent screw (right) is used to orient the plate. Complementary V sections, embedded in the two stages and separated by two widely spaced ball bearings, serve as guiding ways.

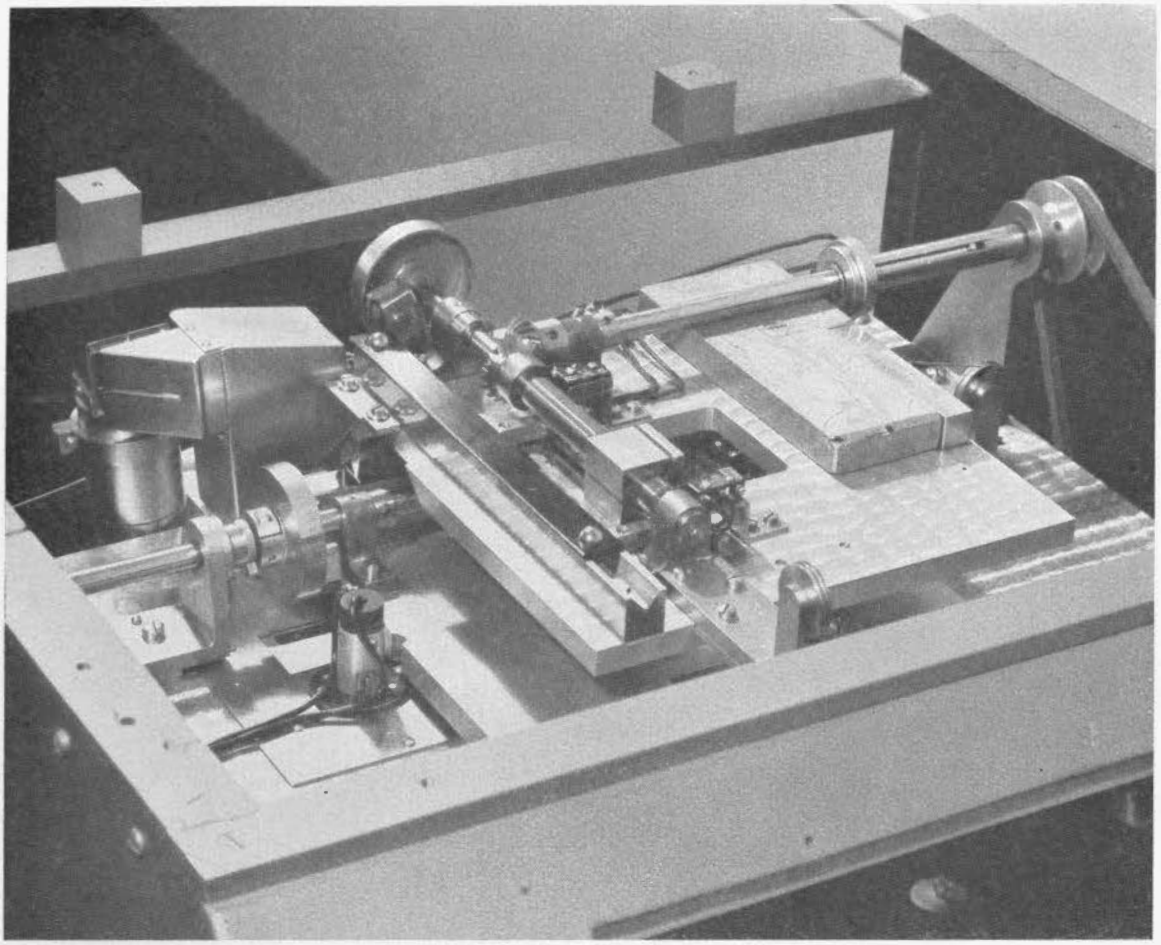


Figure 7.—Removal of the upper movable stage exposes the lower stage. Attached to it are from left to right: the projector for the upper precision screw; the embedded V groove with two widely spaced ball bearings; the precision screw with divided head, bevel gear, and brass nut; a lead block which, with a similar one attached to the under side of the upper stage, counterbalances the overhanging projector; the hardened steel flat at the right edge on which the wheel of the upper stage rides; the nylon string that rides over the pulley to the weight below. The shaft connected to the right hand section of the bevel gear is held in position by a sleeve bearing and a collar adjacent to the gear. The other end of the shaft telescopes easily into the carefully aligned hollow shaft that is mounted to the fixed base plate by a bracket. Pulley and V-belt transmit the drive from the right hand control knob.

The projector for the upper screw head (Dec. screw of Figure 3) presented a different problem because it is attached to a moving part of the instrument. It hangs out from the back corner of the stage, as may be seen in the pictures, and being made of brass required about 5 pounds of lead counter weight. The lead may be seen on the under side of the top stage (Figure 9) and on top of the second stage (Figures 7 and 8). The projection of the image differs still further from that of the lower head in that two small mirrors are inserted along the light path to rotate the image through 90 degrees. Both scale readings are hence made to appear with the same orientation on the screen. In order to have them of comparable size and intensity, the lens in the declination projector is of greater focal length and the light is brighter. The position of the declination projector is so far back that its beam misses the main mirror and a small secondary mirror was required. The two scales are easily read with but a small motion of the head. However their paths are sufficiently divergent that one is more clearly seen than the other by the camera, as in Figure 5.

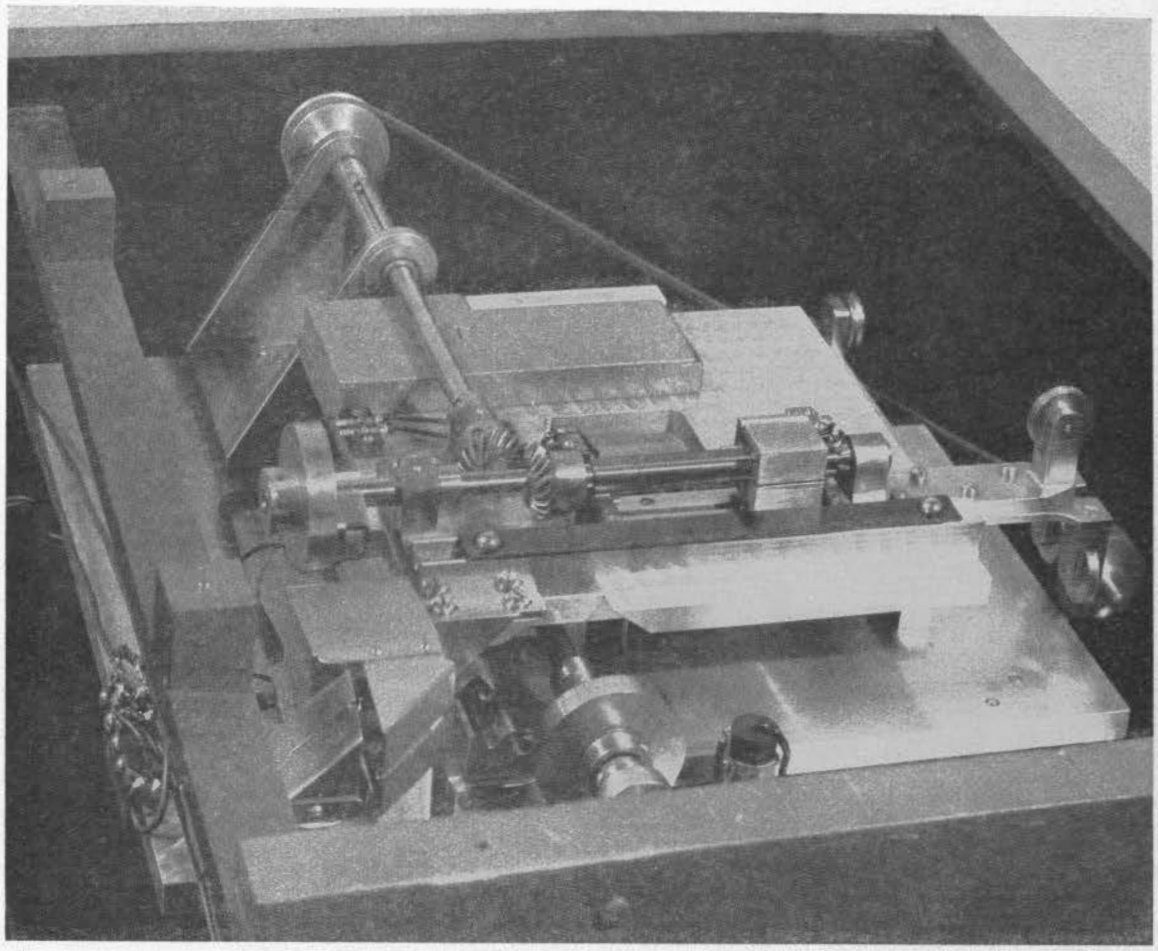


Figure 8.—The projector for reading the head of the upper screw rotates the image of both the head and the gear coupled veeder counter through 90 degrees by the use of two mirrors, as may be seen front left. The nut of the upper screw seen to right of centre operates a micro switch at each end of its run to warn against an over drive. Complementary V sections embedded in the under side of the lower stage and the upper surface of the bottom plate may be seen to the left of the divided head of the lower screw. Pulleys to the right indicate the way in which gravity constraint for the top stage is provided by two weights at the sides of the engine.

The heat of the 21-candle automobile lamps becomes quite apparent after they have been burning for some time. Since this heating is undesirable, a foot switch (Figure 3) has been incorporated which must be pressed to turn on the projectors for the brief interval required to read the scales. There is a further advantage in the intermittent illumination, namely, the fact that one is uninfluenced by the appearance of a scale reading when making a setting.

When the instrument was first used, the foot switch also operated a light aluminum vane to occult the beam from the plate so that when the scale readings appeared on the screen the star images disappeared. The vane was pivoted on the rotor shaft of a small 3-phase motor which may be pulled around into a fixed position when direct current is applied to one of its windings. As seen in Figure 9, the motor is on a slight angle so that gravity serves to let the vane turn around to a back stop. A low voltage swings it around to the front stop where it is in the occulting position. Subsequently it was felt that the

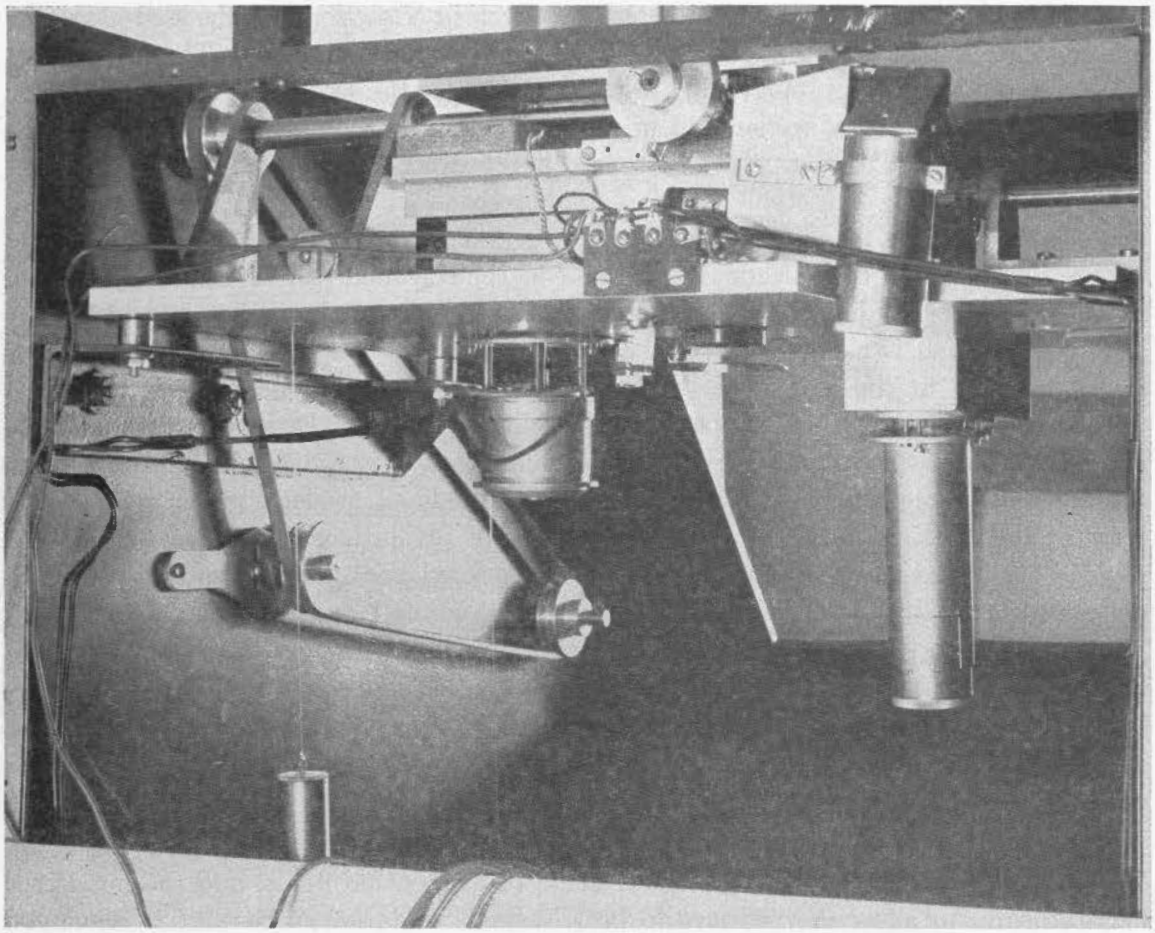


Figure 9.—From the rear of the engine may be seen: the belt transmission on the left from the hand knob to the upper or declination screw; the occulting vane and its control motor under the base plate and the two projectors for the two screw readings on the right. Push-pull screws on the lower projector provide adjustment in the position of the image on the viewing screen.

jar imposed by the vane coming up to its stop was not desirable and, since the scale values may be read quite well with the plate projector not occulted, the use of the occulting vane was discontinued.

THE MECHANICAL PARTS

The mechanical portion of the measuring engine consists of two stages measuring 8×8 inches and spaced $1\frac{3}{4}$ inches apart. They carry the PZT plate, and by their ways or guides define the coordinate axes.

The mounting of the PZT plate is seen in Figure 6. A disc with a collar attached is fitted into a 3-inch circular opening in the top stage. A projection from the disc is engaged by a tangent screw and plunger which imparts a rotational adjustment to the disc and hence to the plate. Over a central hole measuring $1\frac{7}{8}$ inches square the plate is held by a toggle type clamp against two stops. Clamp and stops are all undercut so as to grip the plate and hold it flat against the opening. Three evenly spaced fingers attached to the stage touch lightly onto a flange of the disc to prevent it from lifting.

On the under surface of the top stage an inverted V section is embedded along the left edge and a ball bearing wheel is centrally located at the right edge. The wheel is not visible in the photograph but the corresponding one for the lower stage may be seen in Figures 6 and 7. The V section and wheel are opposed on the upper surface of the next stage by a similar V section with two spaced ball bearings and a polished flat. Parallel to and close by the V section is one of two precision millimeter pitch screws. They are $\frac{1}{2}$ inch diameter, have $3\frac{1}{2}$ inches of thread, and an additional $4\frac{1}{2}$ inches of stock. End thrust is taken by a shallow depression in the threaded end of the screw bearing against a cone of hard steel. The screw is prevented from coming out of its end bearing by a collar which is clamped inside the sleeve bearing at the other end. Beyond the sleeve bearing, at the end of the screw, is located the divided head upon which 200 divisions are ruled, every fourth one numbered 0, 2, 4, . . 98. Estimation to a fifth of a division is readily accomplished to provide readings to one thousandth of a revolution (one micron). Geared to each divided head is a modified veeder counter which turns forward and back to indicate the whole number of revolutions. The numbers on the divided heads and veeder counters have to be engraved back to front so that they will appear correctly on the screen after reflection. Figures 7 and 8 indicate how a bevel gear, clamped to the declination screw, extends the drive over to the right hand side, and a telescoping shaft takes up the right-left motion imparted by the lower screw. The drive transmitted to the right hand side is connected by belt and pulley to the control knob. Ordinary V belt sliced down to small cross section provides a very light, easy transmission.

The nuts associated with the two screws are each formed from a 1-inch cube of brass. The thread is relieved so that contact is made in 3 radial positions, and the nut is cut longitudinally to allow the pressure to be adjusted. Rotation of the nut is prevented by a projection downwards which travels in a straight slot. Contact with the moving stage above is made with a finger from the stage which bears against a hard steel piece set into the nut. Gravity constraint is used to keep the stage in contact with the nut and also to keep the screw against its end bearing. At the two ends of their run the nuts operate micro switches, and the harsh sound of a buzzer prevents an over run with consequent jamming.

The lower moving stage was machined most carefully to be sure that the V section embedded on its upper surface and the one on its under surface were as nearly at right angles as possible. It is the position of the V's which determines the motion of stages and hence directions of the coordinate axes. The drive for the lower stage is provided by the screw and nut in precisely the same manner as with the upper stage. In this case, however, the screw is fastened to the base plate which in turn is bolted securely to the frame. A tooth and slot connection beyond the divided head extends the screw to the left and hence by belt and pulley to the left hand knob.

All the bearing surfaces in the V's and on the flats were polished smooth and then chromium flashed to provide smooth, corrosion free surfaces.

Gravity constraint is provided by two pulley and weight systems (Figure 3). The pulley for the lower stage is to the right and the weight moves near the side wall. The upper stage must be pulled forward and as a result the weight, if hung directly,

would cut across the projected images. Instead it has been divided evenly in two and directed by two pulleys to the left and right thus avoiding a turning moment which would be introduced if the weight were diverted one way only. Nylon fishing line is used as the suspension cord.

The ground glass viewing screen was prepared in the Optics laboratory of National Research Council from selected plate glassby using 280-grit carborundum. Both finer and coarser ground glass was tried, but the former permitted the lamp to be seen, while the latter was too grainy. The fiducial lines are drawn with India ink on the ground glass.

ELECTRICAL FEATURES

The engine plugs into an ordinary wall socket, and has a toggle master switch on the back wall. Inside the back wall under the mirror is a shelf on which are housed the various transformers. A ballast transformer for the mercury vapour lamp feeds to an outlet box on the back cover. The lamp house is hence free to be lifted from its post and unplugged and laid to one side. This is desirable whenever the top is removed for such purposes as cleaning the moving parts, or replacing a small lamp. A toy transformer with several windings supplies illumination for the divided head projectors at two slightly different voltages. The same source would also suffice for the alarm buzzer, though a separate one was installed. A fourth transformer with a single wave rectifier provides the 6 to 8 volts necessary for the occulting vane now no longer used.

SCREW AND COORDINATE VALUES

The screws have been examined for periodic and progressive errors with results as indicated in Table 1 and Figure 10. No compensation has been incorporated in the measurements because the errors are considered to be too small. The two screws differ in length by 3 parts in 10^4, the R.A. screw being the longer.

It is not necessary to know the exact length of the screws in millimeters, since plate scale is determined between the engine and the PZT plate by direct measures. With reference to the measuring engine, the scale of the plate is 48.468 (Dec.) and 48·483 (R.A.) seconds of arc per revolution. The coordinate axes defined by the moving stages differ from 90 degrees by half a minute of arc.

ASSESSMENT

Comparative measures of setting error between the Toepfer and the new measuring machine were made by three persons, each using a different group of stars, but each using the same stars on the two machines. The mean scatter using the Toepfer was 2·7 microns, while the mean for the projection measuring machine was 2·6 microns. Each of the three groups of stars included both good and poor images. It will be seen that the projection engine has very little if any advantage over the Toepfer in the matter of setting error. It should be said in all fairness that the remeasures of plates made with the new projection engine and also with a new Mann, two coordinate engine, show no appreciable difference in the final result over those originally obtained with the Toepfer.

During the 18 months the projection engine has been in service there has been ample opportunity to assess its usefulness. It appears to have met most of the original requirements. The mechanical controls are convenient and respond with very light touch. Upon occasion an operator has scaled two plates in succession, involving nearly 200 settings, and experienced less fatique than was involved in scaling one plate with the older instrument.

ACKNOWLEDGMENTS

The evolution of the projection measuring engine in its final form has been the result of suggestions from several staff members and assistance from the National Research Council Optics Division. Its development in the machine shop was done with care and attention to artistry as well as to precision. Thanks are due particularly to Dr. C. S. Beals for his encouragement.

TABLE I

Rev.	RA Screw		Dec. Screw	
	Error (mm)	Correction (mm)	Error (mm)	Correction (mm)
0		·0000		·0000
	+·0006		+·0003	
·2		−·0006		−·0003
	+·0001		+·0001	
·4		−·0007		−·0004
	−·0004		+·0001	
·6		−·0003		−·0005
	−·0005		+·0003	
·8		+·0002		−·0008
	+·0002		−·0008	
0		·0000		·0000

The periodic error of each screw was determined for each fifth of a revolution. The correction, which compensates for the accumulated error, reaches a maximum of 0·7 micron for the R.A. screw and 0·8 micron for the Dec. screw. These values are too small to apply to plate measures.

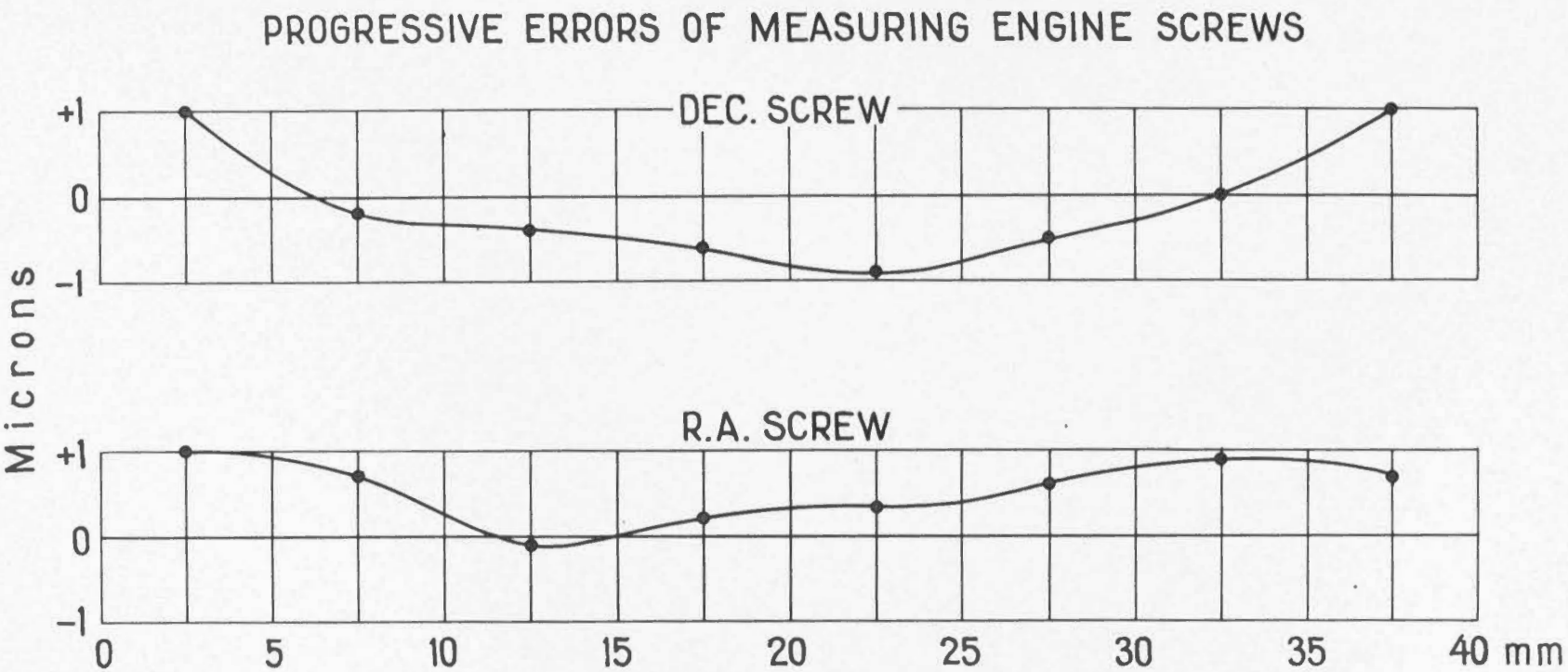

PROGRESSIVE ERRORS OF MEASURING ENGINE SCREWS
DEC. SCREW
R.A. SCREW
Microns
+1
0
-1
+1
0
-1
0
5
10
15
20
25
30
35
40 mm

Figure 10.

CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

VOLUME XV No. 6

A COMPLEX PERSEID SPECTRUM

BY

P. M. MILLMAN

Reprinted from
SKY AND TELESCOPE, Vol. XV, No. 10, *August 1956*

800—1956

A Complex Perseid Spectrum

BY

PETER M. MILLMAN*

DURING observations of the Perseid meteor shower in August, 1952, the spectrum on the third page of this article was photographed by the writer at Meanook Meteor Observatory, Alberta, with the assistance of G. A. Brealey. This is a station operated by the Dominion Observatory, Ottawa, and is located in latitude 54° 36′ 56″ north, longitude 113° 20′ 45″ west, at 2,240 feet above sea level. At the same time, A. A. Griffin and J. M. Grant were taking direct photographs of the Perseids at the Newbrook Meteor Observatory 25.6 miles distant, at latitude 54° 19′ 26″ north, longitude 112° 57′ 15″ west, elevation 2,200 feet.

The meteor appeared in Cygnus at 0:52:44 MST, August 13, 1952. Its visual magnitude was estimated as −2 by Mr. Griffin at Newbrook. I was walking down to the power house in Meanook at the time to check the frequency control of the generators and did not see the meteor itself. The flash, however, was bright enough to be seen on the ground, and when I looked up the train was clearly evident, remaining visible to the naked eye for between 10 and 12 seconds. From the appearance of the Meanook spectrum photograph, the Newbrook estimate of visual magnitude may have been a bit faint. The distance of the meteor from Newbrook (where sky conditions were poor, with considerable cloud) was 5 to 10 per cent greater than from Meanook (where the sky was clear). Thus it is quite possible that the meteor was brighter than magnitude −4 at maximum light, as seen from the spectrum-camera site.

The picture was taken with a Williamson aerial camera, equipped with a Pentac lens of 2.75 inches aperture and of 8-inch focus. This camera was one of three on the same mounting, which was designed by the Radio and Electrical Engineering Division of the National Research Council, Ottawa.[1] A similar mounting, in use near Ottawa, is illustrated here. At Meanook, a four-vane rotating shutter covered the lens 24 times per second, giving equal intervals of exposure and occultation, thus chopping a meteor trail into segments, whose lengths indicate the meteor's velocity.

To form the spectrum, in front of the lens was placed a Bausch and Lomb replica grating, mounted on glass and ruled with 200 lines per millimeter. It must be remembered that a grating, in contrast to a prism, gives a direct image and a number of spectrum images on both sides of this. In old-fashioned gratings the percentage of light in any one image was small. Modern techniques of cutting the grating grooves now make it possible to concentrate most of the light into one specific spectrum image. Thus, at Meanook we used such a blazed grating, which directed about three quarters of the incident light into the first-order spectrum above the direct image as the picture is here oriented.

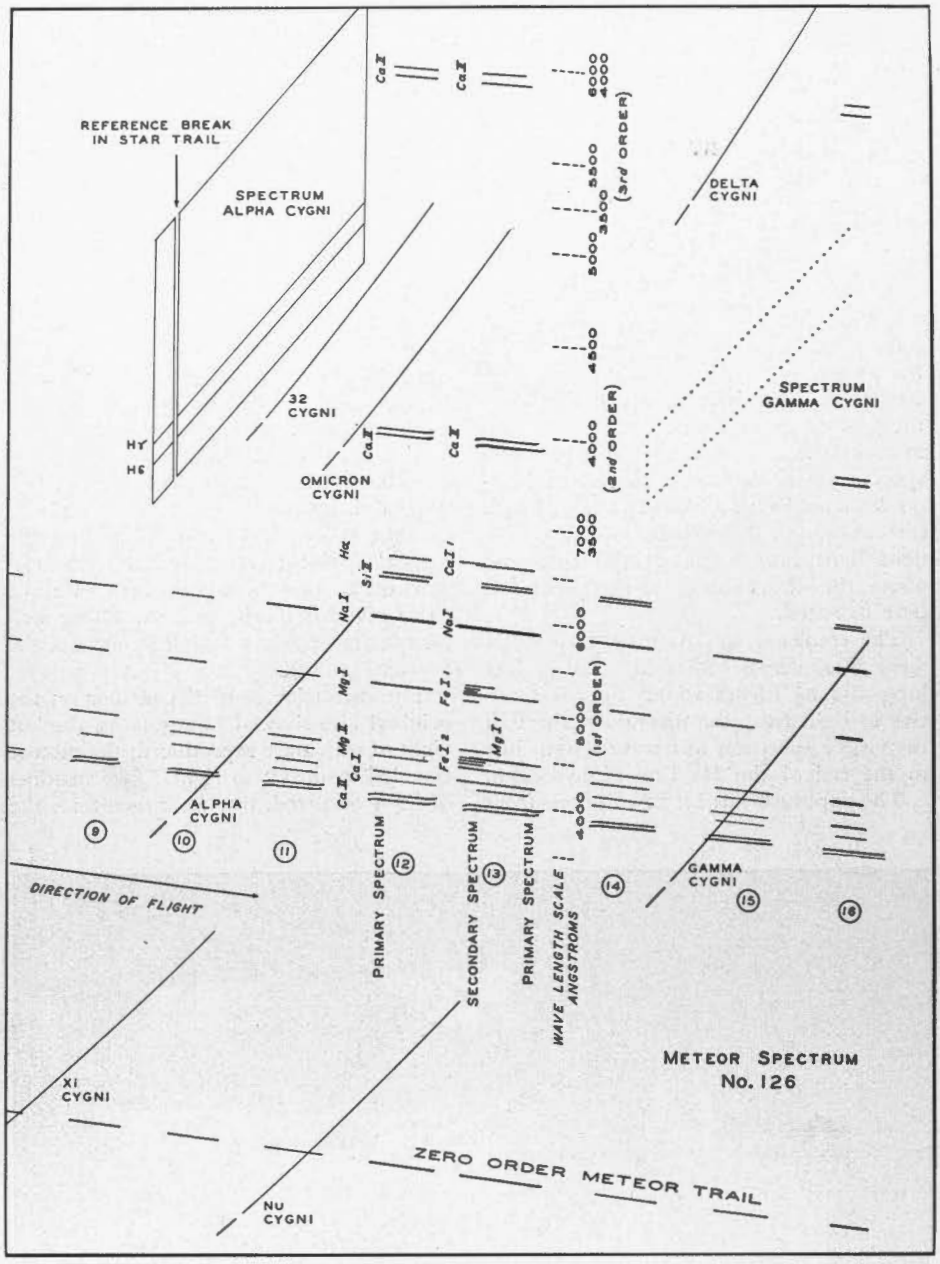
The emulsion was Eastman Super XX Aero film, which comes in rolls 56 feet long and 5½ inches wide. This is sensitive to light from the ultraviolet through the visible spectrum to a wave length just to the red of the Hα line of hydrogen.

The exposure was for 22 minutes, from 0:40 to 1:02 MST, and the lens was covered for 20 seconds at 0:42. The direct images of the star trails can be seen running diagonally from lower left to upper right, with the 20-second break clearly visible near the beginning of each trail. The brightest star in the photograph is Deneb, a white supergiant star of apparent magnitude 1.3. Its spectrum can be seen above its direct trail, and on the original exhibits strongly the very narrow dark lines of hydrogen typical of these high-luminosity *A* stars. Other stellar spectra appear very faintly against the sky background.

The direct image of the meteor on the original film showed 16 segments, the last eight of which are reproduced; the meteor traveled from left to right. Two maxima of light occurred, one at segment 13, the

Peter M. Millman and a battery of meteor spectrographs similar to the one with which the Perseid spectrum on page 377 was obtained. Photograph by George Hunter for the Dominion Observatory.

*National Research Council, Canada, formerly at the Dominion Observatory, Ottawa.



This chart provides a key to the photograph of the Perseid meteor spectrum opposite, which was made with a diffraction grating. It shows at the bottom a direct image of the meteor itself in the zero order, broken into segments by a rotating shutter. But the turning of the shutter was too rapid to affect the star trails, which appear in the zero order also. Next upward in the picture is the spectrum of the first order, with the violet H and K lines of ionized calcium prominent, together with lines of many other elements. Then come spectra of the second and third orders, but these are relatively weak and show practically only the H and K lines. The first-order spectrum of Deneb contains typical hydrogen absorption lines. A portion of the meteor fragmented off between segments 12 and 13, producing the secondary spectrum of lower excitation. From the original negative of this picture all of the lines in the table on page 378 have been identified. Dominion Observatory photograph.

other at the end of the trail, segment 16. The first of these segments is compound, for it shows a secondary image trailing behind the primary. This secondary image resulted from a portion broken off from the main meteor mass, giving a spectrum of much lower excitation and hence very different from the primary spectrum.

A direct photograph of the same Perseid was secured at Newbrook, where the height of appearance was 112 kilometers, according to a preliminary reduction of the two photographs. Segment 1 on the Meanook plate corresponds to a height of 107 kilometers. The heights of the last 11 segments of the spectrum photograph are: Segment 6, 97.8 kilometers; 7, 95.8; 8, 93.9; 9, 91.9; 10, 90.0; 11, 88.1; 12, 86.2; (secondary, 85.0) 13, 84.3; 14, 82.4; 15, 80.5; 16, 79.0.

The visual persistent train that I plotted at Meanook was found to occupy a position from segment 6 to segment 13, corresponding to heights from 98 to 84 kilometers. The lower end of the visual train apparently coincided with the first light maximum of the primary mass, and with the maximum light of the secondary, which was trailing the main mass by about 1.5 kilometers at this point. (The height of the secondary spectrum here is nearly the same as that of the brightest part of the train spectrum of a 1949 Perseid recorded at Ottawa.[2])

The apparent radiant point of this meteor was at altitude 48°, azimuth 51° east of north, very close to the average position of the Perseid radiant for the date. A preliminary calculation of the observed velocity gives just over 60 kilometers per second, again in close agreement with the mean for the Perseid shower.

It will be noticed that the images of the ionized calcium lines are twisted at the ends, making them resemble integration symbols. This peculiar appearance results from lens aberrations, which are stronger at the violet end of the spectrum. The resulting slightly out-of-focus image is shifted when part of the lens is covered by the shutter, as is the case at either end of a segment of the trail.

This meteor spectrum is No. 126 on the world list.[3] More than 100 lines were measured in the primary spectrum and over 30 in the secondary. The features of the primary agree well with those of typical Perseids,[4] but they are shown here in greater detail than in any other meteor spectrum yet photographed. Thus Table I, in which are given the wave lengths of the lines measured, serves as a convenient guide to lines normally present in the spectra of fast meteors. The strongest lines are marked with asterisks. The reader should be able to pick out most of the lines with the help of the wave-length scales given in the key to the photograph. In general, the observed meteor wave lengths agree very well with those predicted from blends of laboratory wave lengths.

An atom of any element may exist in one of a number of states, each characterized by a definite amount of potential energy of the atom. When an atom changes from a higher energy level to a lower, light may be emitted, and this light has a wave length inversely proportional to the energy lost by the atom. If the energy levels in an atom are themselves complex, one pair of levels may have several possible energy differences, and give rise to several wave lengths, or spectral lines. These are said to form a multiplet, and a single multiplet may contain many lines. In discussing spectrum photographs such as this one, it is convenient to consider the multiplets as units, since the lines of one multiplet generally appear or disappear together. Therefore Table I also shows the multiplets identified for each element, num-

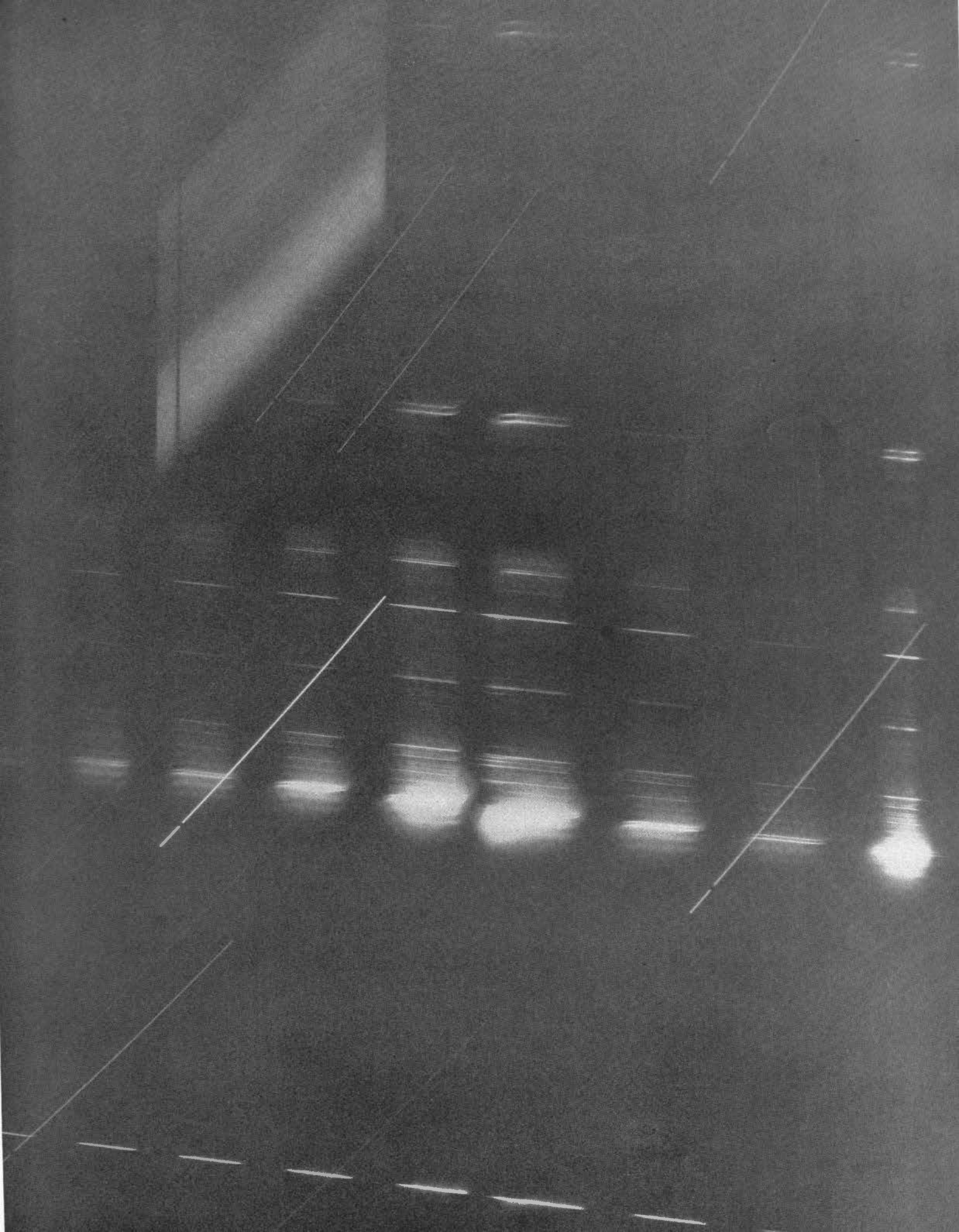


TABLE I – WAVE LENGTHS MEASURED IN SPECTRUM NO. 126

Primary Spectrum I.A.	*Multiplets Identified*	*Secondary Spectrum I.A.*
	FeI 23	3612
3706.9	FeI 5 FeI 21	
3740.7		
3766.1		
3813.9	FeI 4 FeI 20 MgI 3	
3833.4		
3843.5		
3859.6	SiII 1	
3868.2		
3886.8		
3933.5*	CaII 1 SiI 3	3927.5
3968.7*	FeI 43	3963.7
4005.3		
4031.0	MnI 2	
4045.2		4045.0
4063.4		4063.7
4071.3		
4105.3	SiI 2	
4116.4	FeII 28	
4129.9	FeI 3 FeII 27 SiII 3	
4143.0		
4177.5	FeI 42	
4188.5	FeI 152	
4201.1		
4211.2		4214.7
4226.5*	CaI 2	4225.2*
4235.4		
4249.1		
4254.8		4254.8
4261.8		
4272.4		4270.0
4291.0	FeI 41	4290.7
4307.7		4307.7
4325.6		4324.8
4338.5		
4352.8	MgI 14	
4376.5		4375.0*
4383.3*		
4394.2		
4404.9		4403.4
4415.6		
4427.8	FeI 2 CaI 4	4426.2*
4433.9		
4462.0	FeII 37	4460.9*
4481.4*	MgII 4	4482.5*
4508.1	FeII 38	
4516.6		
4523.1		
4531.0		
4546.0		
4552.6		
4556.9		
4570.2	MgI 1 CaI 23	4569.4
4584.7		
4616.9		
4630.1		
4647.4		
4666.4		

Primary Spectrum I.A.	*Multiplets Identified*	*Secondary Spectrum I.A.*
4700.7	MgI 11	
4863.1	FeI 318 HI 1	
4873.9		
4888.8		
4923.0	FeII 42 FeI 16	
4957.6		
5012.8		
5018.4		
5024.4		
5040.2	SiII 5	
5056.8	FeI 1	
5110.2		5108.8*
5126.8		
5143.8		
5170.3*	MgI 2	5167.9*
5184.0*		5180.9
5186.2	FeII 49 CaI 49	
5206.1		5206.4
5229.8		5225.6
5249.2		5248.6
5269.1	FeI 15 FeII 48 CaI 22?	5271.6
5301.8		
5313.7		
5326.0		5327.8
5369.4		
5403.4		
5429.4		5432.6
5453.2		5454.1
		5484.3
	MgI 9	5531.4
5559.9	NI 25?	
5591.3	CaI 21	
5603.9		
5635.9	FeI 1087?	
5659.6		
5683.4	NaI 6	
5861.3	CaI 47	
5870.7		
5892.4*	NaI 1	5891.0*
5948.0	SiI 6	
5979.4	SiII 4	
6008.3	NI 16?	
6124.5	CaI 3	
6159.4	FeII 74? CaI 20 NaI 5	6163.3
6316.9	FeI 13? FeI 168 MgI 23	
6347.3*	SiII 2	
6371.2*		
6399.1		
6438.9	CaI 18	
6448.6	CaI 19	
6459.3		
6465.6		
6478.5		
6486.4		
6494.2		
6505.6		
6562.9	FeI 268 HI 1	
	CaI 1	6573.0
		6594.6
6620.3	NI 20?	
6657.7		
6695.7	AlI 5?	

Footnote to table:—
Where three wave lengths are close-spaced the values refer to the center and the wings of a single line or band.

bered as in the tables by Charlotte E. Moore, in *Contributions from Princeton Observatory,* No. 20, 1945.

The secondary spectrum, produced by the material that broke off from the main mass, has a marked absence of all the ionized lines but those of CaII (singly ionized calcium), which appear at greatly reduced strength. On the other hand, multiplets arising from the ground levels of the neutral atoms are unusually strong, notably FeI 1, FeI 2, MgI 1, and CaI 1. Generally the spectra of fast meteors show the ionized lines of magnesium, silicon, iron, and calcium, but this secondary spectrum confirms evidence from other meteor spectra that the light from the small particles or dust trailing behind a fast meteor may be of relatively low excitation. Bursts in meteor trains seem to result from rapid disintegration of a portion of the main mass, which increases the number of trailing dust particles; thus it is not surprising that the excitation of the iron vapor tends to be lower at bursts, as was found by the writer in 1935.[5]

In all, 66 multiplets of nine neutral elements (FeI, MnI, CaI, SiI, AlI, MgI, NaI, NI, and HI) and of four ionized elements (FeII, CaII, SiII, and MgII) have been identified in the spectrum of this meteor. The photometric study of this photograph has not been completed.

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CANADA

DEPARTMENT OF MINES AND TECHNICAL SURVEYS

DOMINION OBSERVATORIES

PUBLICATIONS

OF THE

Dominion Observatory

OTTAWA

VOL. XV No. 7

Results of Observations made with the Reversible Meridian Circle 1950-1953

Catalogue of 812 Stars

Corrections to 347 FK3 Stars

BY

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EDMOND CLOUTIER, C.M.G., O.A., D.S.P.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1957

90541—1

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ABSTRACT

This publication contains the results of observations made with the Ottawa Meridian Circle from July 1950 to December 1953. The observing program comprised 639 stars required for the photographic zenith telescopes at Ottawa, Herstmonceux, England, and Richmond, Florida, U.S.A., and 173 additional stars; 72 from the Pleiades and Perseus groups and 101 B type stars from a list suggested by Dr. J. H. Oort. The final positions were obtained differentially from observations taken at the same time on 347 FK3 stars considered as fundamentals.

The internal probable error of the places is under ″.20; the attachment to FK3 is shown. New proper motions are given for the stars of the Ottawa zenith list.

INTRODUCTION

This short differential program, carried out under the general supervision of W. S. McClenahan, was undertaken in 1950 to provide improved positions in the FK3 system of stars suitable for use by the photographic zenith telescopes of Ottawa, Greenwich and Richmond. It was intended to familiarize new staff members with meridian circle work and leave time to devote to the publication of previous observations.

Photographic zenith telescopes determine relative star positions with great accuracy, but the attachment to the FK3 system is dependent on concurrent meridian circle observations, particularly of the fainter stars with poor observational histories. The three zenith lists were to be observed at Ottawa, Washington and Greenwich for this purpose.

The results of more than 360 nights of observing during three and one-half years were retained. Distribution of the observations was as follows:

9960	observations on	347 FK3 stars
3639	"	285 Ottawa zenith stars
1038	"	105 Richmond zenith stars
2341	"	249 Herstmonceux zenith stars
1469	"	173 miscellaneous stars
18447		1159 stars

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The miscellaneous stars added to round out the program included 72 members of the Pleiades and Perseus groups from lists of the Dominion Astrophysical Observatory, and 101 B type stars from a list supplied by J. H. Oort of Leiden.

The observers were:

E. G. Woolsey.....from July 1950 to December 1953
R. W. Tanner.....from July 1950 to December 1953
R. A. Jenkins.....from July 1950 to October 1951
R. F. Rodgers.....from July 1952 to September 1952
Ian Halliday.....from November 1952 to December 1953

They were assisted in the reductions by E. C. Arbogast, Miss Olga Boshko, Mrs. B. Crawford and a number of summer assistants.

The probable error of a single observation as determined by examination of the residuals for the program stars in the three PZT zones were as follows:

Herstmonceux.....	R.A.	$\pm^{s}.028$ or $\pm''.27$	Dec $\pm''.33$
Ottawa.....		$\pm.022$ or $\pm .24$	Dec $\pm.32$
Richmond, Florida.....		$\pm.020$ or $\pm .27$	Dec $\pm.32$

Instrumental Equipment

Some changes have been made in the instrumental equipment described in earlier numbers of these publications. Photographic registration of the divided circles, as reported in our Contributions, Vol. 2 No. 10, was in use throughout the program. The field illumination was reddened to aid in the observation of the fainter stars. The printing chronograph has been converted to a synchronous motor drive on crystal-controlled frequency, and served as observing clock with small nearly constant rate. Hourly comparisons of the chronograph were made; at first with the slave of Shortt 29, later with a mechanical sidereal converter controlled by a second mean time crystal.

These improved arrangements led to the determination of a relative personal equation in the clock correction as deduced by:

Woolsey—Tanner..... $^{s}.003$
Woolsey—Halliday..... $-^{s}.021$

This is in part a reflection of a difference in the collimation constant as read by:

Woolsey—Tanner..... $^{s}.003$
Woolsey—Halliday..... $^{s}.009$

No correction for these differences was applied to the right ascensions. Absolute personal equation was measured by observing transits of an artificial star located on the south azimuth mark pier and driven at uniform speeds corresponding to the speed of stars at declinations approximately 20°, 50° and 75°. Contacts in the personal equation machine were recorded on the chronograph together with the contacts of the impersonal micrometer of the telescope. Results are shown in Table I. No corrections for these errors were made to the star observations.

The errors of the declination micrometer have been redetermined with no significant changes from the values given in Vol. XV No. 1 of these publications; the table there given was recast for greater convenience in use. The value of one revolution of the right ascension micrometer screw was remeasured as $3^{s}.225$, the difference from the previous value of $3^{s}.22$ being negligible in application.

A series of experiments with a zenithal mirror failed to give any decisive measure of lateral flexure, as did several nights' observations of transits by reflexion.

The objective and eye ends remained in the position of the 1935-50 program. The relative errors of pairs of circle divisions at right angles as given by camera readings agreed with the tables in Vol. XV No. 1, and these were used.

Observing Plan

It was hoped to secure three or more observations on each program star in each clamp together with as many observations as possible of the FK3 reference stars. These comprised 24 azimuth stars between 80° and the pole; another 28 azimuth stars between 75° and 80°, and 295 stars between 17° and 65°, mainly in 10° zones centred on the three zeniths concerned.

An average night's work, covering a little more than four hours of right ascensions, included four azimuth stars, one at upper, one at lower culmination from each class, a score of clock stars in the zones observed and as many program stars. Collimations, azimuth marks, level and nadir points were read before and after the star observations, and level and nadir readings were repeated at two-hour intervals during the observations.

Barometer, barograph, external thermometer and thermograph and the observing room thermograph were read before and after observing. Thermometer readings at the instrument were taken several times per hour.

Clamp was changed on the first day of each month except December and each month at this time the mean of contacts and contact strip width were determined. The brighter stars were screened down to sixth magnitude and a reversing prism was used in all observations.

Observations of FK3 stars were retained for positions when at least 7 clock stars, two azimuth stars at different culminations and readings of both marks were secured. Program stars were retained when observed with at least 5 clock stars in the zone.

REDUCTION OF OBSERVATIONS

Right Ascensions

All observations were corrected for chronograph rate, pivot error, collimation, diurnal aberration and contact width, as described in Vol. XV No. 3. Using the apparent places (including short-period terms) of the fundamental stars as given in annual publications, a preliminary value of the n in Bessel's formula was found from comparison of the azimuth stars with the mean of the clock stars. Using the level given by autocollimation over mercury, preliminary values of Bessel's m and the azimuth a were determined. A mean azimuth of the marks for the month was found from all observations of polars during the period; then the azimuth of the telescope as deduced from the marks was given a weight approximately equal to that of four polars in combining it with the azimuth from the stars on the individual night to reach an improved azimuth a_o. Final values of m_o, n_o were then calculated with which the subsequent reductions to apparent place of all stars was made.

The standard deviation, σ, of the residuals, observation − FK3 in right ascension was calculated for each night. Nights on which it exceeded $^s.050$ were excluded.

When, as was usually the case, more than one zone was observed, the time stars were divided into corresponding groups, and corrections added to the apparent places of the program stars to refer them to the FK3 stars of the zone. Thus the Richmond stars were referred to 116 FK3 stars

between 20° and 30°, the Ottawa stars to 102 FK3 stars 40° to 50°, and the Greenwich stars to a list submitted by Greenwich of 95 FK3 stars between 42° and 59°, half of these stars being common to the Ottawa zone. The miscellaneous stars were referred to the mean of all FK3 stars observed.

Tables II and III exhibit the clamp differences in right ascension for the FK3 stars. The weights subjoined are given by mn/(m + n) where there are m observations in one clamp and n in the other. Departures from the expected value of zero are small enough to be regarded as accidental. No correction for clamp was applied, the number of observations in each clamp being approximately equal.

Tables IV and V show the differences in right ascension with culmination, and weights dependent on m and n as before. The variation with declination appears to be accidental; that with right ascension possibly signifies a seasonal error in azimuth, which should however be of little effect in the places of the program stars. No correction was applied for the difference, and catalogue positions of the FK3 azimuth stars result from the combination of approximately equal numbers of upper and lower culminations.

Tables VI and VII show the attachment to FK3. The subscripts are the number of stars compared.

Declinations

All observations were corrected for refraction, division error, reduction to the meridian and inclination of the wires where necessary. No correction for run was required. In almost all cases the mean of three or more nadir pointings was taken to determine apparent zenith distance. Small and discordant values for horizontal flexure were measured with the collimators; no correction for flexure was applied. The refraction table of Vol. XV No. 2 (essentially Bessel's) was used; the auxiliary tables have been adapted to desk calculator from their logarithmic form.

A constant value of 45° 23′ 39″ was first assumed for the latitude. The resulting apparent places of the FK3 time stars were compared with FK3, and a $\Delta\varphi$ assumed such as to make the residuals 0-FK3 in declination vanish in the average for the night thus allowing for the variation of latitude. Where the standard deviation σ exceeded ″.60 (for all the FK3 stars) the night was excluded.

The declinations of the program stars were thus referred to the mean of all the FK3 time stars observed on the night.

Tables VIII and IX show the clamp differences in declination for the FK3 stars, with weights dependent on the numbers of observations in each clamp. The departures from zero values are small and accidental.

Tables X and XI show differences with culmination. Since the latitude used in the reduction was derived from the stars 20°–60°, the mean value ″.16 of the difference represents the combined effect of refraction errors, flexure, or a $\Delta\delta_s$ in the reference stars. Observations at both culminations were combined without corrections.

Table XII shows the attachment to FK3. The subscripts are the number of stars compared.

Reduction to Mean Place

The reduction to 1950.0 without proper motion for each year's observations was done at the Computing Centre of the University of Toronto. Values of the star constants and the Besselian day numbers in punched card form were supplied by the kindness of the U.S. Naval Observatory. The reduction for the FK3 stars was done also as a check.

Discrepancies exceeding about three times the standard deviations mentioned were re-examined, and generally the observations were rejected if they could not be corrected. No significant differences by clamp or observer were found, and the mean places and epochs of the catalogue were then formed.

A comparison of about 145 stars of the Ottawa zenith list with PZT places, whose accidental errors should be negligibly small in comparison, gave the following dependence of the differences on the number of meridian circle observations:

No. M.C. Obs.	Mean $\Delta\alpha$(″.01)	No. of Stars	Mean $\Delta\delta$ (″.01)	No. of Stars
4 – 8	17	24	19	41
9 – 15	13	65	18	59
16 – 24	12	39	17	31
25 up	11	17	12	14

The magnitude equation indicated by (PZT-Meridian Circle) is given as follows:

Visual Mag.	$\Delta\alpha$(PZT-MC)	No. of Stars	$\Delta\delta$(PZT-MC)
4.2 – 5.9	+ˢ.011	10	+ ″.03
6.0 – 6.9	+.001	27	– .05
7.0 – 7.9	–.001	66	– .05
8.0 – 9.2	+.002	42	– .02

PROPER MOTIONS OF OTTAWA ZENITH LIST

The Ottawa PZT observed 263 of these stars in 1954, and a comparison of MC with PZT indicated a satisfactory attachment of the latter to the FK3 system. The zenith telescope positions have an accidental probable error of about ″.05, and were accepted as definitive, where available, for finding the proper motions.

Eleven catalogues from the AGK to AGK2 were consulted for earlier places of the Ottawa stars. After reduction to FK3 where necessary and 1950 equinox, a least squares solution for proper motions only was carried out, using Boss' system of weights.

Weights of the resulting proper motions vary greatly; the probable error of the centennial motion corresponding to the modal weight is ″.25. This value is confirmed by comparisons with the modern catalogues. The proper motions while not definitive are a considerable improvement over previously available values, and should meet the needs of the PZT for ten years or so.

Table I

Personal Equation Machine

Observer	Personal Equation		
	Fast	Medium	Slow
Woolsey	$-^{s}.020$	$-^{s}.005$	$+^{s}.030$
Tanner	$-.011$	$-.001$	$-.021$
Jenkins	$+.016$	$-.020$	$+.041$
Rodgers	$-.017$	—	—
Halliday	$-.020$	$-.002$	$+.033$

Table II

Clamp Differences in Right Ascension

Time Stars (Cl. West - Cl. East)

Decl.	$\Delta\alpha$ (Cl. West - Cl. East)								
	0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h	Mean
60° to 65°	$-^{s}.011_{14}$	$-^{s}.010_{4}$	.....	.....	.....	.....	.....	.....	$-^{s}.011_{13}$
55° to 60°	$-.009_{52}$	$+.007_{17}$	$+^{s}.001_{13}$	$-^{s}.013_{13}$	$-^{s}.010_{22}$	$+^{s}.006_{16}$	$+^{s}.007_{2}$	$+^{s}.004_{28}$	$-.002_{148}$
50° to 55°	$.000_{52}$	$+.020_{17}$	$+.013_{10}$	$.000_{20}$	$.000_{18}$	$-.017_{21}$	$+.005_{65}$	$+.002_{21}$	$+.003_{234}$
45° to 50°	$.000_{76}$	$+.001_{71}$	$-.003_{45}$	$+.004_{40}$	$+.001_{22}$	$-.003_{59}$	$-.003_{43}$	$-.004_{67}$	$-.001_{433}$
40° to 45°	$-.014_{21}$	$-.001_{24}$	$-.005_{20}$	$-.001_{45}$	$+.012_{54}$	$+.002_{64}$	$-.003_{54}$	$-.012_{54}$	$-.002_{366}$
35° to 40°	$+.016_{3}$	$-.008_{17}$	.....	.....	.....	.....	.....	.....	$-.005_{20}$
30° to 35°	$-.001_{2}$	$+.001_{3}$	.....	.....	.....	.....	.....	.....	$.000_{5}$
25° to 30°	$-.004_{51}$	$+.013_{45}$	$+.006_{42}$	$.000_{24}$	$+.004_{46}$	$-.007_{49}$	$+.001_{79}$	$+.003_{49}$	$+.002_{335}$
20° to 25°	$+.004_{61}$	$-.004_{29}$	$+.001_{30}$	$-.001_{29}$	$+.007_{13}$	$-.004_{30}$	$-.005_{44}$	$.000_{58}$	$.000_{213}$
15° to 20°	.....	$-.014_{17}$	.....	.....	.....	.....	.....	.....	$-.014_{17}$
Mean	$-.002_{222}$	$+.002_{264}$	$+.001_{184}$	$.000_{171}$	$+.004_{185}$	$-.003_{239}$	$.000_{292}$	$-.002_{277}$	$.000_{1934}$

Table III

Clamp Differences in Right Ascension

AZIMUTH STARS (Cl. West - Cl. East) cos δ

Decl.	$\Delta\alpha$ (Cl. West - Cl. East) cos δ								
	0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h	Mean
Lower									
75° to 80°	$+^{s}.006_{11}$	$-^{s}.006_{18}$	$+^{s}.008_{18}$	$+^{s}.004_{8}$	$+^{s}.004_{22}$	$-^{s}.009_{16}$	$+^{s}.012_{12}$	$^{s}.000_{10}$	$+^{s}.002_{114}$
80° to 90°	$+.014_{8}$	$-.014_{14}$	$+.010_{14}$	$+.016_{24}$	$.000_{25}$	$+.006_{10}$	$+.004_{10}$	$-.004_{12}$	$+.004_{118}$
Upper									
80° to 90°	$+.003_{12}$	$+.003_{14}$	$-.009_{4}$	$-.005_{17}$	$-.005_{14}$	$-.004_{9}$	$+.006_{18}$	$+.007_{21}$	$.000_{118}$
75° to 80°	$+.010_{22}$	$+.017_{18}$	$.000_{10}$	$-.008_{5}$	$-.003_{17}$	$-.008_{20}$	$+.006_{18}$	$+.007_{12}$	$+.004_{122}$
Mean	$+.008_{53}$	$+.001_{62}$	$+.005_{46}$	$+.005_{54}$	$.000_{78}$	$-.005_{55}$	$+.007_{57}$	$+.004_{66}$	$+.002_{473}$

TABLE IV

DIFFERENCES IN RIGHT ASCENSION ABOVE AND BELOW POLE

By Declination

B.D. No.		FK3 No.	Decl.		$\Delta\alpha$(U-L)Cosδ	No. of Obs.		Wt.
						U.	L.	
87°	51	Nd	87°	7′	−ˢ.029	7	14	5
86°	269	Nh	86	36	−.018	9	11	5
85°	19	Na	85	59	+.004	32	25	14
86°	161	Nη	85	54	+.001	13	21	8
85°	74	Nγ	85	53	+.004	9	11	5
85°	383	Nξ	85	51	+.012	58	18	14
86°	176	Nθ	85	51	+.004	17	29	11
85°	63	Nc	85	25	+.006	18	13	8
85°	80	Nδ	85	10	−.004	9	13	6
84°	59	Nβ	84	44	−.008	21	21	10
84°	451	Nν	84	31	+.002	24	7	5
84°	196	Nζ	84	23	+.004	11	15	6
84°	169	Nϵ	84	12	−.009	10	44	8
83°	640	No	84	4	+.017	24	13	8
82°	51	Nα	83	19	+.008	18	10	6
83°	536	Nμ	83	8	+.002	27	21	12
83°	453	Nλ	83	6	+.027	11	6	4
83°	397	Nι	83	0	−.003	23	44	15
82°	743	Nπ	82	54	−.003	44	20	14
83°	297	Nf	82	48	−.001	27	41	16
83°	431	Nκ	82	43	+.018	15	38	11
81°	718	Nk	82	20	+.021	24	17	10
82°	498	Ng	82	7	+.002	18	23	10
81°	302	Ne	81	33	−.011	19	24	11
79°	212	248	79	37	−.015	14	48	11
79°	628	734	79	30	+.009	17	16	8
78°	34	41	79	24	+.008	32	28	15
78°	103	105	79	13	−.022	58	18	14
79°	169	191	79	10	−.002	12	16	7
78°	801	1593	78	34	+.016	8	11	5
78°	367	413	78	2	−.012	10	19	7
78°	527	590	77	56	+.010	21	7	5
77°	800	795	77	55	+.009	20	7	5
78°	412	454	77	53	−.003	16	22	9
78°	478	524	77	46	−.011	12	18	7
77°	764	759	77	33	+.008	27	12	8
77°	115	115	77	33	−.004	19	18	9
77°	627	623	77	32	+.009	10	16	6
77°	699	700	77	30	+.006	12	13	6
76°	928	893	77	21	−.018	14	13	7
77°	461	451	77	11	−.018	19	19	10
77°	266	260	77	2	−.004	13	16	7
76°	667	675	76	58	+.013	21	8	6
76°	594	606	76	0	−.012	24	27	13
76°	393	395	75	58	+.016	9	16	6
75°	836	1594	75	58	−.008	9	13	5
76°	527	1379	75	55	000	24	28	13
76°	310	310	75	54	+.002	16	12	7
76°	596	612	75	52	+.034	9	8	4
75°	189	173	75	51	+.003	23	30	13
75°	682	1494	75	22	+.016	21	9	6
74°	252	205	75	0	−.021	20	12	8

Table V

Differences in Right Ascension Above and Below Pole

By Right Ascension

R.A.	Wt.	$\Delta\alpha$(U-L)Cos δ
0^h to 3^h	52	$-^s.001$
3^h to 6^h	62	$-.003$
6^h to 9^h	38	$-.010$
9^h to 12^h	54	$-.002$
12^h to 15^h	75	$-.001$
15^h to 18^h	53	$+.004$
18^h to 21^h	56	$+.010$
21^h to 24^h	57	$+.004$

Table VI

Differences in Right Ascension (O-FK3)

Dec.	$\Delta\alpha_\delta$	$\Delta\alpha_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
75°L to 80°L	$+^s.007_{28}$	$+^s.071_2$	$+^s.003_4$	$+^s.034_3$	$+^s.037_2$	$+^s.023_4$	$-^s.049_5$	$-^s.065_4$	$+^s.021_4$
80 L to 85 L	$-.129_{15}$	$-.237_1$	$-.267_1$	$+.107_1$	$+.084_3$	$-.084_2$	$+.015_2$	$+.030_3$	$+.098_2$
85 L to 90	$-.314_9$	$-.154_1$	$+.014_3$	$-.163_1$	$+.156_1$	$-.084_1$	$+.392_1$	.....	$-.187_1$
90 to 85	$-.373_9$	$-.037_1$	$+.105_3$	$-.684_1$	$+.230_1$	$+.025_1$	$+.107_1$	.....	$+.042_1$
85 to 80	$-.090_{15}$	$-.176_1$	$-.390_1$	$-.020_1$	$+.031_3$	$-.062_2$	$+.097_1$	$+.056_3$	$+.130_2$
80 to 75	$+.008_{28}$	$+.033_2$	$-.023_4$	$+.004_3$	$+.040_2$	$-.013_4$	$-.003_5$	$-.022_4$	$+.023_4$
65 to 60	$+.010_6$	$+.017_4$	$-.033_2$						
60 to 55	$-.006_{29}$	$-.004_4$	$-.009_5$	$+.015_4$	$+.014_3$	$+.008_4$	$-.010_3$	$-.014_1$	$-.003_5$
55 to 50	$+.002_{33}$	$+.007_7$	$-.019_4$	$+.018_3$	$+.015_4$	$-.013_3$	$+.009_4$	$-.009_6$	$-.001_3$
50 to 45	$-.007_{50}$	$+.008_7$	$-.002_9$	$+.007_7$	$+.009_5$	$-.009_5$	$-.006_7$	$+.003_4$	$-.007_6$
45 to 40	$-.002_{52}$	$-.001_4$	$-.008_8$	$-.006_7$	$+.003_7$	$+.005_7$	$+.008_8$	$+.005_6$	$-.003_6$
40 to 35	$-.013_5$	$-.006_1$	$+.002_4$						
35 to 30	$-.018_2$	$+.022_1$	$-.022_1$						
30 to 25	$+.003_{61}$	$+.005_9$	$-.006_7$	$-.005_{10}$	$-.006_4$	$-.001_8$	$+.002_9$	$+.005_8$	$+.002_2$
25 to 20	$+.005_{55}$	$+.004_7$	$-.007_9$	$-.007_9$	$+.002_6$	$+.010_4$	$+.007_6$	$+.001_6$	$+.001_8$
20 to 15	$+.006_2$	.....	000_2						

Table VII

Differences in Right Ascension (O-FK3)

Dec.	$\Delta\alpha_\delta$ cos δ	$\Delta\alpha_\alpha$ cos δ							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
Over 80°	$-^s.017_{24}$	$-^s.015_2$	$-^s.009_4$	$-^s.007_3$	$+^s.009_4$	$-^s.008_3$	$+^s.013_3$	$+^s.011_3$	$-^s.002_3$
75° to 80°	$+.002_{28}$	$+.006_2$	$-.003_4$	$+.006_3$	$+.008_2$	$+.001_4$	$-.005_5$	$-.007_4$	$+.005_4$

TABLE VIII

CLAMP DIFFERENCES IN DECLINATION

Time Stars (Cl. West - Cl. East)

Dec.	Δδ (Cl. West - Cl. East)								
	0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h	Mean
60° to 65°	$-''.26_{12}$	$+''.15_{4}$	.....	.....	.....	.....	.....	.....	$-''.17_{16}$
55° to 60°	$-.02_{30}$	$+.08_{15}$	$+''.08_{16}$	$+''.02_{20}$	$+''.01_{21}$	$+''.12_{22}$	$+''.39_{1}$	$-''.05_{22}$	$+.03_{147}$
50° to 55°	$-.02_{45}$	$-.13_{15}$	$.00_{8}$	$+.22_{12}$	$-.02_{16}$	$+.20_{13}$	$+.06_{56}$	$-.09_{18}$	$+.02_{183}$
45° to 50°	$+.04_{65}$	$+.01_{61}$	$+.08_{42}$	$-.10_{38}$	$.00_{31}$	$.00_{60}$	$-.04_{42}$	$-.11_{59}$	$-.01_{398}$
40° to 45°	$-.03_{26}$	$+.01_{30}$	$-.07_{31}$	$-.07_{43}$	$-.08_{53}$	$-.05_{68}$	$+.06_{50}$	$+.09_{47}$	$-.02_{348}$
35° to 40°	$-.10_{2}$	$+.07_{17}$	.....	.....	.....	.....	.....	.....	$+.05_{19}$
30° to 35°	$-.15_{2}$	$+.52_{2}$	.....	.....	.....	.....	.....	.....	$+.17_{4}$
25° to 30°	$+.32_{45}$	$.00_{42}$	$-.07_{39}$	$+.18_{21}$	$+.10_{45}$	$+.09_{43}$	$+.04_{70}$	$.00_{40}$	$+.08_{350}$
20° to 25°	$-.13_{49}$	$-.09_{34}$	$-.09_{37}$	$-.12_{27}$	$+.17_{12}$	$+.05_{28}$	$-.01_{39}$	$-.05_{51}$	$-.06_{277}$
15° to 20°	.....	$+.02_{15}$	.....	.....	.....	.....	.....	.....	$+.02_{15}$
Mean	$+.02_{276}$	$.00_{235}$	$-.02_{178}$	$-.02_{161}$	$+.01_{178}$	$+.03_{239}$	$+.03_{258}$	$-.03_{237}$	$.00_{1767}$

TABLE IX

CLAMP DIFFERENCES IN DECLINATION

AZIMUTH STARS (Cl. West - Cl. East)

Dec.	Δ δ (Cl. West–Cl. East)								
	0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h	Mean
75° to 80°	$-''.11_{11}$	$-''.20_{16}$	$+''.04_{15}$	$+''.48_{7}$	$-''.24_{18}$	$-''.27_{13}$	$-''.49_{10}$	$+''.07_{10}$	$-''.12_{100}$
80° to 90°	$+.19_{8}$	$-.38_{13}$	$+.01_{12}$	$-.18_{21}$	$+.31_{25}$	$-.46_{9}$	$+.22_{10}$	$.00_{12}$	$-.01_{110}$
Upper									
80° to 90°	$+.09_{12}$	$+.09_{12}$	$+.06_{4}$	$+.08_{16}$	$-.11_{13}$	$-.05_{9}$	$+.18_{17}$	$.00_{26}$	$+.04_{111}$
75° to 80°	$-.27_{19}$	$-.06_{16}$	$+.24_{9}$	$-.30_{5}$	$-.04_{17}$	$+.18_{20}$	$+.07_{14}$	$-.23_{11}$	$-.03_{111}$
Mean	$-.07_{50}$	$-.14_{57}$	$+.08_{40}$	$-.01_{49}$	$+.02_{78}$	$-.09_{51}$	$+.03_{51}$	$-.03_{61}$	$-.03_{432}$

TABLE X

DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

By Right Ascension

Dec.	Δ δ (Upper–Lower)								
	0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h	Mean
80° to 90°	$-''.18_{20}$	$+''.21_{27}$	$+''.01_{12}$	$+''.29_{37}$	$+''.12_{36}$	$+''.14_{19}$	$-''.02_{25}$	$+''.16_{34}$	$+''.12_{210}$
75° to 80°	$-.05_{27}$	$+.35_{34}$	$+.12_{23}$	$+.35_{12}$	$+.26_{35}$	$+.20_{31}$	$+.26_{24}$	$+.06_{20}$	$+.20_{206}$
Mean	$-.11_{47}$	$+.29_{61}$	$+.08_{35}$	$+.30_{49}$	$+.19_{71}$	$+.18_{50}$	$+.12_{49}$	$+.12_{54}$	$+.16_{416}$

TABLE XI

DIFFERENCES IN DECLINATION ABOVE AND BELOW POLE

By Declination

B.D. No.	FK3 No.	Decl.	Δδ(U-L)	No. of Obs.		Wt.
				U.	L.	
87° 51	Nd	87° 7′	+″.24	7	13	5
86° 269	Nh	86 36	−.09	8	11	5
85° 19	Na	85 59	−.08	32	25	14
86° 161	Nη	85 54	+.04	13	18	8
85° 74	Nγ	85 53	+.30	8	13	5
85° 383	Nξ	85 51	+.39	50	17	13
86° 176	Nθ	85 51	+.24	18	29	11
85° 63	Nc	85 25	+.40	16	14	8
85° 80	Nδ	85 10	+.54	7	13	5
84° 59	Nβ	84 44	−.13	19	21	10
84° 451	Nν	84 31	−.09	23	6	5
84° 196	Nζ	84 23	+.23	10	14	6
84° 169	Nε	84 12	−.13	10	37	8
83° 640	No	84 4	+.01	22	13	8
82° 51	Nα	83 19	−.41	17	9	6
83° 536	Nμ	83 8	−.02	26	20	11
83° 453	Nλ	83 6	−.09	12	6	4
83° 397	Nι	83 0	+.13	21	37	13
82° 743	Nπ	82 54	+.03	39	19	13
83° 297	Nf	82 48	+.39	26	34	15
83° 431	Nκ	82 43	.00	16	37	11
81° 718	Nk	82 20	+.02	20	17	9
82° 498	Ng	82 7	+.33	20	20	10
81° 302	Ne	81 33	+.38	17	21	9
79° 212	248	79 37	+.13	14	42	10
79° 628	734	79 30	+.01	15	13	7
78° 34	41	79 24	.00	26	27	13
78° 103	105	79 13	−.10	15	19	14
79° 169	191	79 10	+.88	9	14	6
78° 801	1593	78 34	+.33	7	11	4
78° 367	413	78 2	+.13	10	17	6
78° 527	590	77 56	−.43	18	5	4
77° 800	795	77 55	−.07	18	7	5
78° 412	454	77 53	+.08	18	19	9
78° 478	524	77 46	+.26	11	13	6
77° 764	759	77 33	+.39	25	12	8
77° 115	115	77 33	+.04	18	17	9
77° 627	623	77 32	+.52	10	15	6
77° 699	700	77 30	+.62	9	12	5
76° 928	893	77 21	+.27	11	13	6
77° 461	451	77 11	+.04	17	17	8
77° 266	260	77 2	.00	11	15	6
76° 667	675	76 58	+.29	20	7	5
76° 594	606	76 0	+.09	25	24	12
76° 393	395	75 58	+.60	9	14	6
75° 836	1594	75 58	−.33	9	10	5
76° 527	1379	75 55	+.57	22	22	11
76° 310	310	75 54	+.23	14	11	6
76° 596	612	75 52	+.57	9	7	4
75° 189	173	75 51	+.53	20	31	12
75° 682	1494	75 22	−.05	18	5	4
74° 252	205	75 0	+.03	17	13	7

TABLE XII

DIFFERENCES IN DECLINATION (O-FK3)

Dec.	$\Delta\delta_\delta$	$\Delta\delta_\alpha$							
		0^h to 3^h	3^h to 6^h	6^h to 9^h	9^h to 12^h	12^h to 15^h	15^h to 18^h	18^h to 21^h	21^h to 24^h
75° to 80°L	$-''.15_{22}$	$+''.17_{2}$	$+''.04_{4}$	$-''.21_{3}$	$-''.05_{2}$	$+''.18_{4}$	$+''.05_{5}$	$-''.19_{4}$	$+''.03_{4}$
80° to 85°L	$-.10_{15}$	$+.58_{1}$	$+.23_{1}$	$-.07_{1}$	$-.16_{3}$	$.00_{2}$	$-.02_{2}$	$+.19_{3}$	$-.42_{3}$
85° to 90°L	$-.11_{9}$	$+.21_{1}$	$-.19_{3}$	$-.22_{1}$	$+.10_{1}$	$+.17_{1}$	$+.35_{1}$	.....	$.00_{1}$
85° to 90°	$+.12_{9}$	$-.10_{1}$	$.00_{3}$	$-.21_{1}$	$-.09_{1}$	$+.18_{1}$	$+.03_{1}$	.....	$+.16_{1}$
80° to 85°	$-.06_{15}$	$+.13_{1}$	$+.06_{1}$	$-.24_{1}$	$+.13_{3}$	$+.03_{2}$	$+.06_{2}$	$+.12_{3}$	$-.44_{2}$
75° to 80°	$+.05_{22}$	$-.09_{2}$	$+.21_{4}$	$-.29_{3}$	$+.11_{2}$	$+.21_{4}$	$+.06_{5}$	$-.15_{4}$	$-.12_{4}$
60° to 65°	$+.15_{6}$	$-.05_{4}$	$+.11_{2}$	.....	.....	.....	.....	.....	.....
55° to 60°	$+.06_{29}$	$+.04_{4}$	$+.04_{5}$	$.00_{4}$	$-.03_{3}$	$+.02_{4}$	$+.02_{3}$	$+.16_{1}$	$-.07_{5}$
50° to 55°	$+.05_{33}$	$-.12_{7}$	$-.03_{4}$	$-.13_{2}$	$-.05_{4}$	$-.11_{3}$	$+.08_{4}$	$+.09_{6}$	$+.26_{3}$
45° to 50°	$+.01_{40}$	$+.02_{7}$	$+.06_{9}$	$+.04_{7}$	$.00_{5}$	$-.05_{5}$	$-.02_{7}$	$+.07_{4}$	$-.13_{6}$
40° to 45°	$+.02_{32}$	$+.10_{4}$	$+.14_{3}$	$-.02_{7}$	$-.07_{7}$	$-.03_{7}$	$+.02_{8}$	$-.02_{5}$	$-.09_{6}$
35° to 40°	$+.06_{5}$	$-.03_{1}$	$+.01_{4}$	.....	.....	.....	.....	.....	.....
30° to 35°	$+.14_{2}$	$+.13_{1}$	$-.12_{1}$	.....	.....	.....	.....	.....	.....
25° to 30°	$-.07_{61}$	$+.07_{9}$	$+.07_{9}$	$+.07_{10}$	$-.21_{4}$	$+.01_{8}$	$-.01_{9}$	$-.09_{8}$	$-.07_{6}$
20° to 25°	$.00_{55}$	$-.04_{7}$	$+.07_{9}$	$+.02_{9}$	$-.02_{6}$	$-.10_{4}$	$+.10_{6}$	$-.08_{6}$	$-.05_{8}$
15° to 20°	$+.12_{2}$	.....	$.00_{2}$	.....	.....	.....	.....	.....	.....

Catalogue of 812 Stars

Reduced Without Proper Motion 1950.0

The catalogue is divided into four parts as follows:

285 Ottawa Zenith Stars.

105 Richmond, Florida, Zenith Stars.

249 Herstmonceux Zenith Stars.

173 Additional Stars.

The various columns give:

1. A current number within the group in order of right ascension.
2. The BD number.
3. The visual magnitude and spectral type, mostly from the Henry Draper Catalogue.
4. and 8.

   The observed right ascension and declination reduced to 1950.0 without proper motion.
5. and 6. 9 and 10.

   The first and second terms of the precession taken from AGK2.
7. and 11.

   Centennial proper motion. For the Ottawa stars these are newly derived in the FK3 system as explained above; for the Richmond stars Washington has derived preliminary values from various catalogues reduced to FK3. For the additional stars common to GC the proper motions of that catalogue are given. No proper motions are given for the Herstmonceux stars.

12 and 13.

The number of observations in each coordinate. When these are equal only one is quoted.

14 and 15.

The mean epoch of the observations in each coordinate.

When these are equal only one is quoted.

An asterisk refers to a footnote on the same page.

Part I

Catalogue of 285

Ottawa Zenith Stars

Observed in the Years 1950 to 1953

Reduced Without Proper Motion

to the

Equinox 1950.0

90541—4

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
1	44° 4549	7.6 F8	0h 2m 22s.575	+308″.73	+ 1s.62	+ 0s.15	45° 23′ 46″.82	+2004″.2	− 0″.6	− 6″.0	15 15	52.00 52.14
2	44 18	8.8	8 23.741	312.31	1.68	+ 0.05	30 42.63	2002.9	1.2	+ 0.4	6 5	52.24 52.16
3	44 50	8.0 F0	13 6.817	315.04	1.71	+ 0.15	15 59.04	2001.0	1.7	− 1.1	31 26	52.35 52.45
4	44 51	8.4 A0	13 29.383	315.23	1.70	+ 0.02	10 29.53	2000.8	1.7	+ 0.2	10 9	51.56 51.65
5	44 62	7.0 F5	17 53.280	317.83	1.74	+ 0.59	13 54.42	1998.2	2.2	− 0.6	42 33	52.30 52.33
6	45 124	7.6 G5	0 29 4.370	+324.62	+ 1.86	+ 0.23	45 39 2.81	+1988.1	− 3.4	− 3.2	24 21	52.29 52.48
7	45 128	8.5 Ma	34 53.242	327.82	1.87	+ 0.12	19 45.85	1981.1	4.1	+ 1.5	9 6	51.58 51.52
8	45 181	7.4 K5	40 2.992	331.10	1.94	− 0.23	39 21.29	1973.7	4.6	− 0.2	14 12	51.60 51.84
9	45 188	8.6 G6	41 34.833	331.99	1.95	− 0.46	38 46.94	1971.4	4.8	+ 3.8	6 6	51.42 51.25
10	45 192	8.6 B9	43 4.828	332.84	1.95	− 0.13	37 21.86	1968.9	4.9	+ 0.3	7 6	51.17 51.08
11	44 162	7.8 A3	0 43 40.235	+332.77	+ 1.93	− 0.21	45 9 13.13	+1968.0	− 5.1	+ 0.5	9 7	52.27 52.39
12	44 186	8.8 A5	49 56.712	336.39	1.96	− 0.35	10 13.58	1956.8	5.7	− 1.7	6	51.93
13	45 237	6.2 K0	54 49.221	339.62	2.03	+ 0.07	34 10.26	1947.2	6.3	− 0.5	21 16	52.39 52.52
14	44 206	7.2 A3	55 26.108	339.70	2.01	− 0.21	19 39.78	1945.9	6.3	− 1.6	10 8	51.80 51.56
15	44 215	7.0 F5	58 27.373	341.25	2.01	+ 0.96	11 0.94	1939.4	6.7	− 1.5	29 24	52.36 52.44
16	44 252	8.7 F8	1 7 3.190	+346.52	+ 2.09	+ 0.54	45 28 53.60	+1919.1	− 7.7	− 1.5	7 8	52.53 52.67
17	44 272	8.8 K0	14 19.677	350.40	2.11	+ 0.01	19 59.74	1899.8	8.5	− 0.3	11 8	51.90 51.91
18	44 279	7.5 K2	16 6.742	351.57	2.13	− 0.02	26 35.53	1894.7	8.7	+ 1.8	10 11	51.59 51.79
19	44 312	8.1 K0	25 43.160	356.79	2.17	+ 0.58	22 31.73	1865.7	9.9	+ 0.3	8 8	51.66 51.91
20	44 326	8.7 A5	31 37.208	359.95	2.19	+ 0.17	20 24.10	1846.2	10.6	+ 1.1	11	52.01
21	44 341	6.3 A0	1 35 30.432	+361.69	+ 2.18	− 0.16	45 8 45.62	+1832.7	−11.1	+ 0.8	14 10	52.44 52.28
22	45 404	6.7 G5	36 32.794	363.17	2.22	+ 2.08	37 39.30	1829.1	11.3	−22.5	17 12	52.13 52.33
23	45 464p	9.0 A0	48 35.963	369.51	2.25	− 0.03	33 49.53	1783.4	12.7	− 1.5	8	51.46
24	44 392	8.1 A5	54 49.035	372.30	2.24	− 0.14	21 22.42	1758.0	13.4	+ 0.7	21 20	52.09 52.10
25	45 519	8.8	59 44.837	375.18	2.26	− 0.01	29 56.48	1736.8	14.0	0.0	6	52.19
26	45 523	8.1 A3	2 0 0.249	+375.40	+ 2.26	+ 0.04	45 32 14.81	+1735.7	−14.1	− 0.5	9 8	51.82 51.82
27	45 554	7.7 F5	6 1.451	378.64	2.27	− 0.19	36 15.81	1708.8	14.8	+ 0.5	17 14	51.51 52.63
28	45 583	7.5 A0	13 55.558	382.62	2.27	− 0.01	36 26.47	1671.7	15.8	− 0.6	11 10	52.46 52.50
29	44 473	8.8 A0	19 32.476	384.50	2.24	− 0.07	16 56.87	1644.1	16.4	+ 0.4	8 5	52.92 53.02
30	44 483	7.6 G5	21 50.208	386.00	2.25	− 0.23	25 22.50	1632.5	16.6	− 7.8	18 15	52.60 52.60
31	44 512	7.3 G5	2 27 10.323	+387.94	+ 2.23	+ 0.05	45 12 36.37	+1605.0	−17.2	− 0.8	10 8	52.09 52.12
32	45 624	8.6	30 13.130	390.02	2.24	− 0.07	26 6.58	1588.9	17.6	0.0	10 8	51.84 51.71
33	44 558	8.4 F8	38 28.572	393.37	2.21	+ 0.86	16 53.91	1543.9	18.6	− 3.0	12 9	52.01 52.15
34	44 569	8.1 F8	41 28.785	395.06	2.21	− 0.18	23 20.71	1527.0	18.9	− 4.4	6 5	51.92 51.47
35	44 573	8.1 A0	43 1.365	395.29	2.19	− 0.03	14 29.09	1518.2	19.1	+ 0.4	18 15	52.26 52.33
36	44 582	8.7 G5	2 46 22.396	+396.64	+ 2.18	− 0.03	45 11 51.45	+1498.9	−19.5	− 0.4	8 7	51.65 51.62
37	45 710s	7.8 B9	3 3 24.430	405.09	2.14	+ 0.35	33 32.07	1396.0	21.5	− 4.4	13	52.90
38	45 721	8.6 K2	8 17.935	407.07	2.11	− 0.19	33 1.58	1365.0	22.0	− 1.7	9 7	51.67 51.73
39	44 648	6.4 Ma	12 40.012	407.45	2.04	+ 0.28	9 45.38	1336.8	22.4	− 3.0	12 10	52.45 52.44
40	44 677	7.5 B8	18 4.382	409.70	2.02	− 0.06	12 28.92	1301.2	22.9	+ 1.0	12 11	52.43 52.49
41	44 695	7.6 B8	3 22 11.246	+411.73	+ 2.00	− 0.01	45 20 25.60	+1273.6	−23.4	+ 0.2	13 11	52.32 52.31
42	44 744	8.1 K2	31 35.549	414.95	1.93	− 0.13	16 59.82	1209.0	24.5	− 0.1	22 18	52.25 52.27
43	45 811	5.6 B9	42 28.792	419.65	1.86	+ 0.21	31 36.05	1131.8	25.5	− 2.2	7 6	51.60 52.02
44	45 828	8.1 K0	48 7.121	420.62	1.79	− 0.10	18 14.99	1090.7	26.0	+ 0.3	12 11	52.25 52.52
45	45 836	7.9 K0	50 29.488	421.62	1.78	+ 0.03	21 53.77	1073.3	26.1	− 2.9	13 12	52.45 52.49
46	45 858	8.6 A0	3 56 23.117	+424.23	+ 1.74	+ 0.14	45 33 25.21	+1029.4	−26.7	− 1.2	14	52.06
47	45 868	8.8 A2	4 2 7.732	425.66	1.67	+ 0.03	29 15.82	986.0	27.2	− 1.2	6 4	52.23 52.43
48	45 887	7.8 G5	7 34.408	426.32	1.60	+ 0.16	16 24.32	944.2	27.6	− 4.0	9 9	51.91 52.15
49	45 921	7.6 A0	17 17.999	429.21	1.50	+ 0.22	20 46.34	868.4	28.3	− 2.8	9 7	52.21 52.67
50	45 937	9.0	24 45.663	430.73	1.40	− 0.09	16 13.79	809.1	29.0	0.0	7 4	51.45 51.51

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
51	45° 947	8.8	4h 28m 40s.875	+432s.53	+ 1s.37	− 0s.02	45° 28′ 27″.51	+ 777″.6	−29″.2	− 0″.5	7 4	51.99 52.24
52	45 955	7.7 B9	30 27.485	433.19	1.36	0.00	31 54.72	763.3	29.4	− 1.0	10 8	52.32 52.41
53	45 971	9.0 F8	35 56.141	434.35	1.28	+ 0.31	31 21.20	718.8	29.7	+ 0.1	7 6	52.09 52.11
54	45 987	7.7 A0	44 15.208	435.50	1.17	+ 0.07	24 5.26	650.4	30.1	− 3.3	10 8	52.28 52.47
55	45 999	8.2 G0	50 54.231	437.62	1.08	+ 0.03	36 1.14	595.1	30.6	+ 0.4	7 8	51.65 51.92
56	45 1000	8.0 F5	4 51 5.939	+437.77	+ 1.09	+ 0.02	45 37 35.32	+ 593.5	−30.6	− 3.4	8 6	52.17 52.51
57	45 1023	7.8 B9	57 39.207	437.72	0.98	− 0.09	22 25.03	538.5	30.8	− 0.8	10 10	52.27 52.45
58	45 1054	8.8 A0	5 6 43.301	439.21	0.86	− 0.01	24 23.66	461.7	31.2	+ 0.9	8 6	52.29 52.03
59	45 1070	9.0 F0	9 59.167	440.06	0.81	+ 0.07	29 49.30	433.9	31.3	− 2.6	7 5	52.31 52.21
60	45 1090s	8.4 F0	15 16.834	439.31	0.74	+ 0.14	11 44.66	388.6	31.5	+ 0.5	7 5	52.26 52.52
61	45 1099	8.4 F0	5 17 15.638	+439.63	+ 0.70	− 0.08	45 13 3.74	+ 371.6	−31.6	+ 0.9	7 6	53.19 53.38
62	45 1115	8.5 A0	21 38.171	439.93	0.64	+ 0.04	11 4.18	333.9	31.7	+ 0.2	10 7	52.03 52.33
63	45 1131	7.8 F8	28 57.632	442.06	0.54	− 0.06	30 6.70	270.6	32.0	− 3.5	10 8	52.30 52.51
64	45 1132	7.9 G5	29 3.010	441.85	0.54	+ 0.11	27 22.21	269.8	32.0	− 1.9	8 5	51.96 51.88
65	45 1150	8.1 G5	35 20.233	442.14	0.44	+ 0.70	25 17.95	215.3	32.1	−10.8	11 7	52.14 52.47
66	45 1163	8.5 F6	5 40 9.186	+441.39	+ 0.36	+ 0.20	45 12 8.56	+ 173.3	−32.1	− 6.7	6 4	51.70 51.77
67	45 1178	8.0 F3	45 2.925	441.70	0.29	− 0.02	13 17.70	130.7	32.2	− 2.2	8 6	52.12 52.17
68	45 1183	8.5 A2	48 1.231	442.11	0.24	− 0.07	17 14.27	104.7	32.2	− 1.3	7 9	51.63 51.73
69	45 1216	6.6 A0	55 42.870	443.83	0.13	− 0.01	37 0.64	37.5	32.3	− 1.6	7 6	51.85 51.82
70	45 1225	7.6 A0	57 36.654	441.68	0.10	− 0.02	9 35.51	20.9	32.2	− 1.1	8	52.43
71	45 1235	7.2 A2	6 0 51.733	+443.73	+ 0.05	+ 0.04	45 35 24.70	− 7.5	−32.3	− 5.5	14 10	52.05 52.16
72	45 1237	8.1 K5	1 22.911	443.26	0.04	− 0.04	29 30.77	12.1	32.3	− 0.5	7 6	52.10 52.11
73	45 1248	7.3 A0	4 37.137	443.57	− 0.01	− 0.07	33 44.34	40.4	32.3	− 2.0	21 18	52.19 52.27
74	45 1270	8.0 A0	11 53.356	443.72	0.12	+ 0.11	37 38.27	103.9	32.3	− 2.0	16 13	52.09 52.10
75	45 1278	8.5 A0	13 14.736	443.90	0.14	+ 0.01	40 29.76	115.8	32.3	+ 0.2	8 7	52.24 52.27
76	45 1284	8.4	6 14 12.648	+443.04	− 0.15	+ 0.08	45 30 7.55	− 124.2	−32.2	− 0.5	7 5	52.65 52.74
77	45 1289	7.4 K0	18 3.541	443.52	0.21	+ 0.05	38 7.33	157.8	32.2	− 1.5	14 12	51.70 51.71
78	45 1296	8.0 K5	20 52.438	441.30	0.25	+ 0.13	11 41.42	182.3	32.0	+ 0.3	8 6	52.21 52.46
79	45 1328	8.8 A2	34 4.495	440.35	0.44	− 0.10	11 23.58	296.9	31.7	− 0.2	9	52.25
80	45 1346	8.7 G5	40 22.152	440.79	0.54	+ 0.09	24 50.31	351.2	31.6	− 3.2	6 5	52.61 52.52
81	45 1360	9.1 K5	6 49 41.813	+440.83	− 0.69	+ 0.11	45 39 12.72	− 431.2	−31.3	− 1.4	7 6	52.12 51.97
82	45 1363	9.0 A2	50 50.701	438.80	0.69	− 0.12	14 51.08	441.0	31.1	− 4.1	5 6	52.37 52.49
83	45 1367	4.8 A2	53 58.312	437.99	0.73	− 0.19	9 40.38	467.6	30.9	− 0.5	7	51.76
84	45 1380	8.9 A0	59 55.151	438.68	0.83	− 0.02	30 1.09	518.1	30.8	− 0.7	6 5	52.40 52.26
85	45 1383	7.6 F0	7 0 28.583	436.95	0.82	− 0.12	8 18.62	522.8	30.6	− 3.8	9 6	52.20 52.28
86	45 1388	8.5 F0	7 3 31.744	+437.99	− 0.88	0.00	45 28 26.84	− 548.5	−30.5	− 2.0	19 14	52.02 52.06
87	45 1394	7.8 K0	7 13.713	436.72	0.91	− 0.12	19 48.15	579.5	30.3	− 0.8	19 16	52.29 52.45
88	45 1408	6.7 K0	11 59.663	436.63	0.99	− 0.08	29 52.45	619.3	30.1	− 2.9	8 7	51.61 51.70
89	45 1415	7.6 F2	14 24.084	434.94	1.01	− 0.08	13 12.42	639.3	30.0	− 6.9	6 4	52.12 52.12
90	45 1422	5.6 F0	17 40.510	434.77	1.06	− 0.46	19 21.71	666.4	29.7	+ 0.7	11 8	51.75 52.00
91	45 1434	9.2	7 24 35.153	+433.51	− 1.15	− 0.17	45 21 28.21	− 723.0	−29.2	− 0.3	8 6	51.41 51.16
92	45 1441	8.1 G5	27 57.536	432.17	1.18	− 0.08	13 6.33	750.5	29.0	− 2.3	24 20	51.97 52.15
93	45 1459	8.3 F2	34 7.726	430.57	1.25	− 0.05	10 21.53	800.2	28.6	− 2.9	8 8	51.86 51.99
94	45 1474	8.8 G5	40 20.277	430.39	1.34	− 0.17	28 49.41	849.7	28.2	− 1.7	6	51.84
95	45 1476	7.6 K0	40 45.648	430.32	1.35	0.00	29 20.58	853.1	28.2	− 2.9	12 11	52.13 52.23
96	45 1496	8.0 K2	7 46 58.980	+428.61	− 1.42	+ 0.09	45 28 4.53	− 902.0	−27.7	− 1.0	18 16	52.12 52.26
97	45 1509	8.1 A3	53 21.671	427.35	1.49	− 0.19	35 2.97	951.4	27.3	− 1.1	10	52.34
98	45 1550	7.8 K0	8 8 24.265	421.94	1.63	+ 0.31	21 32.30	1065.1	25.9	− 0.4	10 8	52.14 52.43
99	45 1561	7.7 K2	16 5.005	420.52	1.71	+ 0.02	37 29.33	1121.4	25.2	− 3.2	15 14	52.12 52.20
100	45 1568	8.1 K0	19 5.899	419.07	1.74	− 0.37	30 44.81	1143.1	24.9	− 7.3	10 8	51.82 51.77

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
1	44° 4549	7.6 F8	0h 2m 22s.575	+308″.73	+ 1s.62	+ 0s.15	45° 23′ 46″.82	+2004″.2	− 0″.6	− 6″.0	15 15	52.00 52.14
2	44 18	8.8	8 23.741	312.31	1.68	+ 0.05	30 42.63	2002.9	1.2	+ 0.4	6 5	52.24 52.16
3	44 50	8.0 F0	13 6.817	315.04	1.71	+ 0.15	15 59.04	2001.0	1.7	− 1.1	31 26	52.35 52.45
4	44 51	8.4 A0	13 29.383	315.23	1.70	+ 0.02	10 29.53	2000.8	1.7	+ 0.2	10 9	51.56 51.65
5	44 62	7.0 F5	17 53.280	317.83	1.74	+ 0.59	13 54.42	1998.2	2.2	− 0.6	42 33	52.30 52.33
6	45 124	7.6 G5	0 29 4.370	+324.62	+ 1.86	+ 0.23	45 39 2.81	+1988.1	− 3.4	− 3.2	24 21	52.29 52.48
7	45 128	8.5 Ma	34 53.242	327.82	1.87	+ 0.12	19 45.85	1981.1	4.1	+ 1.5	9 6	51.58 51.52
8	45 181	7.4 K5	40 2.992	331.10	1.94	− 0.23	39 21.29	1973.7	4.6	− 0.2	14 12	51.60 51.84
9	45 188	8.6 G6	41 34.833	331.99	1.95	− 0.46	38 46.94	1971.4	4.8	+ 3.8	6 6	51.42 51.25
10	45 192	8.6 B9	43 4.828	332.84	1.95	− 0.13	37 21.86	1968.9	4.9	+ 0.3	7 6	51.17 51.08
11	44 162	7.8 A3	0 43 40.235	+332.77	+ 1.93	− 0.21	45 9 13.13	+1968.0	− 5.1	+ 0.5	9 7	52.27 52.39
12	44 186	8.8 A5	49 56.712	336.39	1.96	− 0.35	10 13.58	1956.8	5.7	− 1.7	6	51.93
13	45 237	6.2 K0	54 49.221	339.62	2.03	+ 0.07	34 10.26	1947.2	6.3	− 0.5	21 16	52.39 52.52
14	44 206	7.2 A3	55 26.108	339.70	2.01	− 0.21	19 39.78	1945.9	6.3	− 1.6	10 8	51.80 51.56
15	44 215	7.0 F5	58 27.373	341.25	2.01	+ 0.96	11 0.94	1939.4	6.7	− 1.5	29 24	52.36 52.44
16	44 252	8.7 F8	1 7 3.190	+346.52	+ 2.09	+ 0.54	45 28 53.60	+1919.1	− 7.7	− 1.5	7 8	52.53 52.67
17	44 272	8.8 K0	14 19.677	350.40	2.11	+ 0.01	19 59.74	1899.8	8.5	− 0.3	11 8	51.90 51.91
18	44 279	7.5 K2	16 6.742	351.57	2.13	− 0.02	26 35.53	1894.7	8.7	+ 1.8	10 11	51.59 51.79
19	44 312	8.1 K0	25 43.160	356.79	2.17	+ 0.58	22 31.73	1865.7	9.9	+ 0.3	8 8	51.66 51.91
20	44 326	8.7 A5	31 37.208	359.95	2.19	+ 0.17	20 24.10	1846.2	10.6	+ 1.1	11	52.01
21	44 341	6.3 A0	1 35 30.432	+361.69	+ 2.18	− 0.16	45 8 45.62	+1832.7	−11.1	+ 0.8	14 10	52.44 52.28
22	45 404	6.7 G5	36 32.794	363.17	2.22	+ 2.08	37 39.30	1829.1	11.3	−22.5	17 12	52.13 52.33
23	45 464p	9.0 A0	48 35.963	369.51	2.25	− 0.03	33 49.53	1783.4	12.7	− 1.5	8	51.46
24	44 392	8.1 A5	54 49.035	372.30	2.24	− 0.14	21 22.42	1758.0	13.4	+ 0.7	21 20	52.09 52.10
25	45 519	8.8	59 44.837	375.18	2.26	− 0.01	29 56.48	1736.8	14.0	0.0	6	52.19
26	45 523	8.1 A3	2 0 0.249	+375.40	+ 2.26	+ 0.04	45 32 14.81	+1735.7	−14.1	− 0.5	9 8	51.82 51.82
27	45 554	7.7 F5	6 1.451	378.64	2.27	− 0.19	36 15.81	1708.8	14.8	+ 0.5	17 14	51.51 52.63
28	45 583	7.5 A0	13 55.558	382.62	2.27	− 0.01	36 26.47	1671.7	15.8	− 0.6	11 10	52.46 52.50
29	44 473	8.8 A0	19 32.476	384.50	2.24	− 0.07	16 56.87	1644.1	16.4	+ 0.4	8 5	52.92 53.02
30	44 483	7.6 G5	21 50.208	386.00	2.25	− 0.23	25 22.50	1632.5	16.6	− 7.8	18 15	52.60 52.60
31	44 512	7.3 G5	2 27 10.323	+387.94	+ 2.23	+ 0.05	45 12 36.37	+1605.0	−17.2	− 0.8	10 8	52.09 52.12
32	45 624	8.6	30 13.130	390.02	2.24	− 0.07	26 6.58	1588.9	17.6	0.0	10 8	51.84 51.71
33	44 558	8.4 F8	38 28.572	393.37	2.21	+ 0.86	16 53.91	1543.9	18.6	− 3.0	12 9	52.01 52.15
34	44 569	8.1 F8	41 28.785	395.06	2.21	− 0.18	23 20.71	1527.0	18.9	− 4.4	6 5	51.92 51.47
35	44 573	8.1 A0	43 1.365	395.29	2.19	− 0.03	14 29.09	1518.2	19.1	+ 0.4	18 15	52.26 52.33
36	44 582	8.7 G5	2 46 22.396	+396.64	+ 2.18	− 0.03	45 11 51.45	+1498.9	−19.5	− 0.4	8 7	51.65 51.62
37	45 710s	7.8 B9	3 3 24.430	405.09	2.14	+ 0.35	33 32.07	1396.0	21.5	− 4.4	13	52.90
38	45 721	8.6 K2	8 17.935	407.07	2.11	− 0.19	33 1.58	1365.0	22.0	− 1.7	9 7	51.67 51.73
39	44 648	6.4 Ma	12 40.012	407.45	2.04	+ 0.28	9 45.38	1336.8	22.4	− 3.0	12 10	52.45 52.44
40	44 677	7.5 B8	18 4.382	409.70	2.02	− 0.06	12 28.92	1301.2	22.9	+ 1.0	12 11	52.43 52.49
41	44 695	7.6 B8	3 22 11.246	+411.73	+ 2.00	− 0.01	45 20 25.60	+1273.6	−23.4	+ 0.2	13 11	52.32 52.31
42	44 744	8.1 K2	31 35.549	414.95	1.93	− 0.13	16 59.82	1209.0	24.5	− 0.1	22 18	52.25 52.27
43	45 811	5.6 B9	42 28.792	419.65	1.86	+ 0.21	31 36.05	1131.8	25.5	− 2.2	7 6	51.60 52.02
44	45 828	8.1 K0	48 7.121	420.62	1.79	− 0.10	18 14.99	1090.7	26.0	+ 0.3	12 11	52.25 52.52
45	45 836	7.9 K0	50 29.488	421.62	1.78	+ 0.03	21 53.77	1073.3	26.1	− 2.9	13 12	52.45 52.49
46	45 858	8.6 A0	3 56 23.117	+424.23	+ 1.74	+ 0.14	45 33 25.21	+1029.4	−26.7	− 1.2	14	52.06
47	45 868	8.8 A2	4 2 7.732	425.66	1.67	+ 0.03	29 15.82	986.0	27.2	− 1.2	6 4	52.23 52.43
48	45 887	7.8 G5	7 34.408	426.32	1.60	+ 0.16	16 24.32	944.2	27.6	− 4.0	9 9	51.91 52.15
49	45 921	7.6 A0	17 17.999	429.21	1.50	+ 0.22	20 46.34	868.4	28.3	− 2.8	9 7	52.21 52.67
50	45 937	9.0	24 45.663	430.73	1.40	− 0.09	16 13.79	809.1	29.0	0.0	7 4	51.45 51.51

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
51	45° 947	8.8	4h 28m 40s.875	+432s.53	+ 1s.37	− 0s.02	45° 28′ 27″.51	+ 777″.6	−29″.2	− 0″.5	7	4	51.99	52.24
52	45 955	7.7 B9	30 27.485	433.19	1.36	0.00	31 54.72	763.3	29.4	− 1.0	10	8	52.32	52.41
53	45 971	9.0 F8	35 56.141	434.35	1.28	+ 0.31	31 21.20	718.8	29.7	+ 0.1	7	6	52.09	52.11
54	45 987	7.7 A0	44 15.208	435.50	1.17	+ 0.07	24 5.26	650.4	30.1	− 3.3	10	8	52.28	52.47
55	45 999	8.2 G0	50 54.231	437.62	1.08	+ 0.03	36 1.14	595.1	30.6	+ 0.4	7	8	51.65	51.92
56	45 1000	8.0 F5	4 51 5.939	+437.77	+ 1.09	+ 0.02	45 37 35.32	+ 593.5	−30.6	− 3.4	8	6	52.17	52.51
57	45 1023	7.8 B9	57 39.207	437.72	0.98	− 0.09	22 25.03	538.5	30.8	− 0.8	10	10	52.27	52.45
58	45 1054	8.8 A0	5 6 43.301	439.21	0.86	− 0.01	24 23.66	461.7	31.2	+ 0.9	8	6	52.29	52.03
59	45 1070	9.0 F0	9 59.167	440.06	0.81	+ 0.07	29 49.30	433.9	31.3	− 2.6	7	5	52.31	52.21
60	45 1090s	8.4 F0	15 16.834	439.31	0.74	+ 0.14	11 44.66	388.6	31.5	+ 0.5	7	5	52.26	52.52
61	45 1099	8.4 F0	5 17 15.638	+439.63	+ 0.70	− 0.08	45 13 3.74	+ 371.6	−31.6	+ 0.9	7	6	53.19	53.38
62	45 1115	8.5 A0	21 38.171	439.93	0.64	+ 0.04	11 4.18	333.9	31.7	+ 0.2	10	7	52.03	52.33
63	45 1131	7.8 F8	28 57.632	442.06	0.54	− 0.06	30 6.70	270.6	32.0	− 3.5	10	8	52.30	52.51
64	45 1132	7.9 G5	29 3.010	441.85	0.54	+ 0.11	27 22.21	269.8	32.0	− 1.9	8	5	51.96	51.88
65	45 1150	8.1 G5	35 20.233	442.14	0.44	+ 0.70	25 17.95	215.3	32.1	−10.8	11	7	52.14	52.47
66	45 1163	8.5 F6	5 40 9.186	+441.39	+ 0.36	+ 0.20	45 12 8.56	+ 173.3	−32.1	− 6.7	6	4	51.70	51.77
67	45 1178	8.0 F3	45 2.925	441.70	0.29	− 0.02	13 17.70	130.7	32.2	− 2.2	8	6	52.12	52.17
68	45 1183	8.5 A2	48 1.231	442.11	0.24	− 0.07	17 14.27	104.7	32.2	− 1.3	7	9	51.63	51.73
69	45 1216	6.6 A0	55 42.870	443.83	0.13	− 0.01	37 0.64	37.5	32.3	− 1.6	7	6	51.85	51.82
70	45 1225	7.6 A0	57 36.654	441.68	0.10	− 0.02	9 35.51	20.9	32.2	− 1.1	8		52.43	
71	45 1235	7.2 A2	6 0 51.733	+443.73	+ 0.05	+ 0.04	45 35 24.70	− 7.5	−32.3	− 5.5	14	10	52.05	52.16
72	45 1237	8.1 K5	1 22.911	443.26	0.04	− 0.04	29 30.77	12.1	32.3	− 0.5	7	6	52.10	52.11
73	45 1248	7.3 A0	4 37.137	443.57	− 0.01	− 0.07	33 44.34	40.4	32.3	− 2.0	21	18	52.19	52.27
74	45 1270	8.0 A0	11 53.356	443.72	0.12	+ 0.11	37 38.27	103.9	32.3	− 2.0	16	13	52.09	52.10
75	45 1278	8.5 A0	13 14.736	443.90	0.14	+ 0.01	40 29.76	115.8	32.3	+ 0.2	8	7	52.24	52.27
76	45 1284	8.4	6 14 12.648	+443.04	− 0.15	+ 0.08	45 30 7.55	− 124.2	−32.2	− 0.5	7	5	52.65	52.74
77	45 1289	7.4 K0	18 3.541	443.52	0.21	+ 0.05	38 7.33	157.8	32.2	− 1.5	14	12	51.70	51.71
78	45 1296	8.0 K5	20 52.438	441.30	0.25	+ 0.13	11 41.42	182.3	32.0	+ 0.3	8	6	52.21	52.46
79	45 1328	8.8 A2	34 4.495	440.35	0.44	− 0.10	11 23.58	296.9	31.7	− 0.2	9		52.25	
80	45 1346	8.7 G5	40 22.152	440.79	0.54	+ 0.09	24 50.31	351.2	31.6	− 3.2	6	5	52.61	52.52
81	45 1360	9.1 K5	6 49 41.813	+440.83	− 0.69	+ 0.11	45 39 12.72	− 431.2	−31.3	− 1.4	7	6	52.12	51.97
82	45 1363	9.0 A2	50 50.701	438.80	0.69	− 0.12	14 51.08	441.0	31.1	− 4.1	5	6	52.37	52.49
83	45 1367	4.8 A2	53 58.312	437.99	0.73	− 0.19	9 40.38	467.6	30.9	− 0.5	7		51.76	
84	45 1380	8.9 A0	59 55.151	438.68	0.83	− 0.02	30 1.09	518.1	30.8	− 0.7	6	5	52.40	52.26
85	45 1383	7.6 F0	7 0 28.583	436.95	0.82	− 0.12	8 18.62	522.8	30.6	− 3.8	9	6	52.20	52.28
86	45 1388	8.5 F0	7 3 31.744	+437.99	− 0.88	0.00	45 28 26.84	− 548.5	−30.5	− 2.0	19	14	52.02	52.06
87	45 1394	7.8 K0	7 13.713	436.72	0.91	− 0.12	19 48.15	579.5	30.3	− 0.8	19	16	52.29	52.45
88	45 1408	6.7 K0	11 59.663	436.63	0.99	− 0.08	29 52.45	619.3	30.1	− 2.9	8	7	51.61	51.70
89	45 1415	7.6 F2	14 24.084	434.94	1.01	− 0.08	13 12.42	639.3	30.0	− 6.9	6	4	52.12	52.12
90	45 1422	5.6 F0	17 40.510	434.77	1.06	− 0.46	19 21.71	666.4	29.7	+ 0.7	11	8	51.75	52.00
91	45 1434	9.2	7 24 35.153	+433.51	− 1.15	− 0.17	45 21 28.21	− 723.0	−29.2	− 0.3	8	6	51.41	51.16
92	45 1441	8.1 G5	27 57.536	432.17	1.18	− 0.08	13 6.33	750.5	29.0	− 2.3	24	20	51.97	52.15
93	45 1459	8.3 F2	34 7.726	430.57	1.25	− 0.05	10 21.53	800.2	28.6	− 2.9	8	8	51.86	51.99
94	45 1474	8.8 G5	40 20.277	430.39	1.34	− 0.17	28 49.41	849.7	28.2	− 1.7	6		51.84	
95	45 1476	7.6 K0	40 45.648	430.32	1.35	0.00	29 20.58	853.1	28.2	− 2.9	12	11	52.13	52.23
96	45 1496	8.0 K2	7 46 58.980	+428.61	− 1.42	+ 0.09	45 28 4.53	− 902.0	−27.7	− 1.0	18	16	52.12	52.26
97	45 1509	8.1 A3	53 21.671	427.35	1.49	− 0.19	35 2.97	951.4	27.3	− 1.1	10		52.34	
98	45 1550	7.8 K0	8 8 24.265	421.94	1.63	+ 0.31	21 32.30	1065.1	25.9	− 0.4	10	8	52.14	52.43
99	45 1561	7.7 K2	16 5.005	420.52	1.71	+ 0.02	37 29.33	1121.4	25.2	− 3.2	15	14	52.12	52.20
100	45 1568	8.1 K0	19 5.899	419.07	1.74	− 0.37	30 44.81	1143.1	24.9	− 7.3	10	8	51.82	51.77

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
101	45°	1587	9.1		8h 24m 43.s022	+416.s87	− 1.s78	+ 0.s02	45° 26′ 42.″27	−1183.″1	−24.″2	− 1.″5	9	10	52.06	51.96
102	45	1601	7.8	F0	30 49.183	414.41	1.82	− 0.28	22 7.34	1225.8	23.6	− 2.3	11	8	52.26	52.44
103	45	1613	8.1	G5	37 33.110	411.78	1.86	0.00	19 39.91	1271.8	22.9	+ 1.5	10		52.48	
104	45	1624	8.1	F5	40 29.382	411.79	1.90	− 0.23	38 6.62	1291.6	22.7	− 5.2	14	12	52.06	52.08
105	45	1641	7.6	G0	46 21.397	407.84	1.90	− 0.57	9 52.00	1330.4	21.9	− 1.7	11	10	52.05	52.14
106	45	1649	6.1	K0	8 48 48.217	+408.06	− 1.95	− 0.11	45 30 6.26	−1346.3	−21.7	− 3.4	27	25	52.12	52.25
107	45	1666	8.8	A3	58 34.871	403.51	1.98	0.00	20 3.60	1408.4	20.6	− 0.1	7	6	52.01	51.84
108	45	1680	8.4	G5	9 3 59.550	401.38	2.00	− 0.58	22 41.62	1441.7	20.0	− 4.9	9	8	52.17	52.18
109	46	1484	8.6	K0	12 11.033	398.70	2.06	− 0.18	38 54.18	1490.5	19.1	− 1.6	10	11	52.07	51.98
110	45	1708	6.6	K0	18 6.180	395.84	2.07	− 0.07	35 0.34	1524.6	18.4	− 3.0	23	21	52.04	52.03
111	45	1723	8.9	A3	9 24 29.418	+391.63	− 2.05	− 0.11	45 8 56.27	−1560.3	−17.6	− 1.6	17	16	52.19	52.27
112	45	1727	9.0	A2	27 27.736	390.57	2.06	− 0.17	15 6.93	1576.5	17.3	− 0.8	16	14	52.31	52.34
113	45	1731	8.3	K0	28 54.750	390.02	2.08	− 0.26	17 51.56	1584.3	17.0	+ 2.0	10	9	51.89	51.98
114	45	1741	9.0	K0	34 20.450	387.50	2.08	+ 0.03	18 21.46	1612.9	16.4	− 0.5	11	9	52.12	52.11
115	45	1762	6.8	K0	43 31.116	383.19	2.09	+ 0.48	20 51.54	1659.2	15.3	−13.0	13	11	52.03	52.20
116	45	1769	8.0	F2	9 47 19.955	+381.24	− 2.09	− 0.78	45 19 8.28	−1677.7	−14.8	− 9.1	21	17	52.01	52.10
117	45	1778	8.7	G5	52 36.876	378.87	2.10	+ 0.16	25 8.03	1702.5	14.2	− 0.9	19	17	52.37	52.38
118	46	1566	6.5	K0	54 48.113	378.34	2.12	+ 0.05	39 12.78	1712.6	14.0	− 3.4	12	10	51.73	51.76
119	45	1787	8.6		58 8.705	375.81	2.09	− 0.18	18 40.90	1727.6	13.5	+ 1.2	12		51.89	
120	45	1798	7.5	F2	10 4 2.076	372.78	2.08	− 0.07	18 15.71	1753.1	12.8	− 0.6	30	27	52.28	52.40
121	45	1811	7.8	K2	10 11 8.530	+369.15	− 2.07	− 0.09	45 20 7.67	−1782.4	−11.9	+ 0.4	22	21	52.24	52.29
122	45	1814	7.4	F5	13 27.851	367.84	2.06	− 0.13	17 34.29	1791.6	11.6	+ 2.3	15	14	51.90	51.97
123	45	1819	7.8	G5	14 27.382	367.27	2.05	− 0.63	16 9.17	1795.5	11.5	− 2.0	8		52.32	
124	45	1832	6.5	K0	25 36.228	361.70	2.04	− 0.19	28 5.40	1836.6	10.1	− 2.3	14	14	52.08	52.23
125	46	1643	8.4	K5	32 46.099	357.87	2.02	− 0.22	30 55.99	1860.8	9.3	+ 1.6	10	9	52.40	52.54
126	45	1860s	8.1	K0	10 42 20.026	+352.11	− 1.96	− 0.18	45 13 58.05	−1890.3	− 8.1	+ 0.5	24	23	52.18	52.13
127	46	1671	8.0	K0	49 38.783	348.49	1.94	− 0.71	33 11.13	1910.6	7.3	− 3.6	16	14	51.99	52.11
128	45	1879	7.0	K0	56 8.874	344.68	1.90	− 0.48	27 58.80	1927.0	6.5	− 3.7	8	7	52.09	52.08
129	45	1890	9.0	G5	11 1 40.649	341.47	1.86	+ 0.09	25 37.80	1939.7	5.8	− 2.6	11		52.07	
130	45	1903	7.5	G0	12 20.125	335.24	1.79	− 0.48	20 5.58	1961.1	4.7	− 6.1	8		52.01	
131	45	1912	6.7	F0	11 17 46.625	+332.04	− 1.75	− 0.63	45 16 21.01	−1970.3	− 4.0	− 2.8	22	20	52.40	52.42
132	46	1717	7.9	A2	19 5.615	331.56	1.76	− 0.56	36 23.52	1972.4	3.9	− 1.5	12	13	52.42	52.41
133	45	1924	*	Mb	25 6.821	327.92	1.71	− 0.07	27 38.76	1981.1	3.2	− 2.3	14		52.36	
134	45	1926	6.9	K0	25 13.438	327.63	1.69	+ 0.06	9 14.65	1981.2	3.2	− 2.2	17	19	52.43	52.46
135	45	1947p	8.4	G0	36 6.324	321.41	1.62	− 5.40	23 4.03	1993.4	2.0	− 0.7	6		52.26	
136	45	1947s	6.3	G0	11 36 7.225	+321.40	− 1.62	− 5.62	45 23 6.63	−1993.4	− 2.0	+ 1.4	11		52.27	
137	45	1952	7.9	F2	37 9.719	320.82	1.62	+ 0.15	26 1.88	1994.3	1.9	− 1.4	17		52 15	
138	45	1966	8.6	G0	48 18.874	314.23	1.52	− 0.27	23 1.74	2001.6	0.8	+ 3.1	16		52.21	
139	45	1977	8.3	Ma	54 41.979	310.45	1.46	− 0.20	17 18.98	2003.7	0.1	− 0.6	11	12	52.18	52.19
140	45	2001	8.8	F8	12 8 12.920	302.46	1.35	+ 0.30	27 13.47	2003.0	+ 1.2	− 6.5	10		51.76	
141	45	2016	8.5		12 14 23.880	+298.83	− 1.29	− 0.26	45 22 1.43	−2000.3	+ 1.7	− 2.2	11		52.45	
142	45	2023	8.5		17 3.513	297.33	1.26	− 0.24	9 28.35	1998.7	2.0	− 8.1	9	11	52.15	52.27
143	45	2030	8.9		21 29.288	294.68	1.23	− 0.11	18 43.14	1995.5	2.4	+ 1.5	8		51.92	
144	45	2039	8.8		25 51.639	292.07	1.19	− 0.30	24 15.68	1991.5	2.8	+ 7.5	15	16	51.96	51.98
145	46	1791	7.7	A3	29 13.741	290.03	1.16	− 0.26	30 5.78	1988.0	3.1	− 1.4	22	21	52.26	52.20
146	46	1802	8.0	F0	12 35 10.379	+286.52	− 1.11	+ 0.15	45 31 42.12	−1980.7	+ 3.6	+ 1.2	22	20	52.25	52.30
147	46	1805	7.1	F2	36 10.614	285.96	1.09	− 1.35	29 31.88	1979.3	3.7	− 3.8	31	32	52.33	52.30
148	46	1811	8.8		38 15.852	284.73	1.08	− 0.26	29 39.97	1976.4	3.8	− 0.3	14	15	51.87	51.90
159	45	2069	9.2	K5	52 38.926	276.49	0.93	0.00	22 46.60	1951.6	5.0	− 2.0	8		51.81	
150	45	2096	8.6	F5	13 12 12.576	265.27	0.76	− 0.02	26 41.16	1905.6	6.4	− 1.0	12	12	52.24	52.07

Position 1950 + T = Position 1950 + T (1st Term) + T² (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch

* 133, 6ᵐ5 to 7ᵐ3.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
151	45° 2104	8.7 F5	13h 17m 5s.520	+262s.66	− 0s.71	− 1s.38	45° 21′ 45″.27	−1891″.9	+ 6″.7	− 3″.4	8	52 06
152	45 2105	8.2 G5	18 12.339	262.03	0.70	− 0.23	22 17.17	1888.7	6.8	− 2.1	10	52.12
153	45 2120	8.3 F5	33 51.771	253.62	0.56	− 0.44	16 12.89	1838.5	7.8	− 1.8	10	52.25
154	45 2123	8.2 G5	37 15.528	251.86	0.53	− 0.13	14 6.55	1826.5	8.0	+ 2.7	23 25	52.33 52.29
155	45 2124	8.0 K2	38 14.814	251.32	0.52	+ 0.03	14 23.80	1822.9	8.0	− 1.1	22	52.33
156	46 1894	8.9 F5	13 41 17.123	+248.98	− 0.51	+ 0.06	45 35 47.08	−1811.7	+ 8.1	− 1.8	11 14	52.80 52.49
157	45 2131	8.6 F5	46 33.439	246.53	0.45	− 0.35	25 6.49	1791.5	8.5	+ 1.0	8 9	52.34 52.23
158	45 2140	8.6 F8	55 33.211	241.87	0.38	− 0.08	23 55.55	1754.8	8.9	+ 0.1	21 23	52.49 52.44
159	45 2148	8.1 K0	59 10.984	239.70	0.36	+ 0.17	31 36.54	1739.3	9.0	− 0.8	12	52.42
160	45 2155	9.0	14 3 46.824	237.41	0.31	+ 0.17	29 53.08	1719.0	9.3	+ 1.7	11 13	52.16 52.11
161	45 2160p	9.2 K0	14 10 39.285	+234.12	− 0.26	− 0.33	45 25 52.19	−1687.3	+ 9.6	+ 2.4	7	52.22
162	45 2170	8.4 K0	19 18.624	229.57	0.20	− 0.01	32 21.19	1645.2	9.8	+ 1.0	15 13	52.36 52.43
163	45 2178	9.1 G5	22 45.812	228.35	0.18	− 1.45	22 22.32	1627.8	10.1	+ 3.4	9	51.80
164	45 2193s	8.7 A2	30 56.065	224.65	0.13	+ 0.05	18 52.82	1585.1	10.3	− 0.7	8 10	52.70 52.43
165	45 2203	8.4 F8	36 54.248	221.20	0.08	− 0.07	32 45.41	1552.6	10.5	− 1.7	9 9	52.13 52.14
166	46 1981	7.7 G5	14 39 16.592	+219.86	− 0.07	− 1.10	45 37 44.04	−1539.4	+10.6	−19.3	24 26	52.69 52.67
167	45 2214	6.8 F0	42 38.357	219.05	0.06	+ 0.52	23 47.50	1520.4	10.7	− 2.0	13 13	52.34 52.19
168	45 2230	8.5 F8	49 57.372	215.88	0.02	− 0.68	22 33.73	1477.9	11.0	+ 6.8	17	52.64
169	45 2233	7.9 F5	52 37.587	214.32	0.00	− 0.62	30 1.01	1462.1	11.0	+ 5.4	21 19	52.73 52.77
170	45 2237	8.7 G0	54 26.486	213.18	+ 0.01	+ 0.22	36 38.09	1451.2	11.0	− 1.5	5	53.01
171	45 2253	8.8 F8	15 1 51.754	+211.48	+ 0.04	− 1.65	45 10 51.01	−1405.6	+11.3	+30.6	10	52.86
172	45 2266	8.7 G5	10 23.089	207.45	0.08	− 0.86	20 56.86	1351.5	11.4	+15.4	11 12	52.45 52.35
173	45 2270	8.8	13 17.506	206.57	0.09	− 0.29	16 27.21	1332.7	11.5	0.0	8 7	51.99 52.08
174	45 2277	7.9 K0	16 56.978	205.42	0.11	− 0.39	11 53.11	1308.6	11.7	+ 0.9	11 10	52.73 52.88
175	45 2284	6.2 K2	22 23.848	202.45	0.12	− 0.16	26 48.52	1272.2	11.6	− 0.3	14	52.72
176	45 2307	8.8 K2	15 34 0.418	+197.59	+ 0.17	+ 0.15	45 36 46.00	−1192.1	+11.8	− 2.1	9	52.34
177	45 2311	8.6	34 48.538	198.81	0.16	+ 0.08	13 1.58	1186.5	12.0	−13.0	7 9	52.51 52.27
178	45 2317	7.9 F0	37 32.785	197.64	0.18	+ 0.27	16 42.99	1167.1	11.9	+ 1.4	12 13	52.63 52.54
179	45 2323	8.3 K5	41 9.621	196.88	0.18	− 0.21	9 30.47	1141.3	12.1	− 0.2	12 12	53.01 52.85
180	45 2325	8.0 G5	42 27.958	195.22	0.18	− 0.41	28 18.93	1131.8	12.0	+ 3.1	8 10	52.66 52.40
181	45 2329	7.9 K0	15 44 38.434	+195.66	+ 0.19	+ 0.12	45 10 35.08	−1116.1	+12.1	− 3.1	16 15	52.32 52.25
182	45 2355	8.7 F2	58 7.324	189.75	0.22	− 0.27	35 35.80	1016.3	12.1	− 0.5	8	52.13
183	45 2360	8.8 G5	59 18.074	191.26	0.21	+ 0.02	8 11.93	1007.4	12.3	− 1.8	8 7	52.66 52.84
184	45 2374	7.4 K0	16 6 25.414	187.67	0.23	− 0.03	30 41.91	953.1	12.2	+ 0.9	17	52.52
185	45 2377	8.0 F5	7 20.758	187.52	0.23	+ 0.18	29 1.10	946.0	12.3	− 0.2	11	52 51
186	45 2385	8.3 F0	16 13 25.106	+185.56	+ 0.24	− 0.33	45 33 21.37	− 898.8	+12.2	+ 0.1	11 13	52.67 52.56
187	45 2404	7.4 G5	23 47.703	183.20	0.24	− 0.64	29 27.27	816.8	12.4	+ 1.7	11	52.71
188	45 2411	8.5 A5	26 16.468	183.06	0.24	+ 0.03	23 11.57	797.0	12.4	+ 1.9	9 12	52.52 52.33
189	45 2420	9.0	29 15.880	182.34	0.24	0.00	23 33.32	772.9	12.4	− 2.8	7 8	52.41 52.53
190	45 2432	8.8	36 5.265	181.44	0.24	− 0.20	15 25.65	717.5	12.5	+ 2.7	7	52.68
191	45 2446	8.4 G5	16 43 41.715	+180.19	+ 0.23	− 0.28	45 11 37.99	− 655.0	+12.5	− 0.5	6 7	52.66 52.07
192	45 2453	8.4 G0	47 27.462	179.07	0.23	− 0.33	17 12.81	623.8	12.5	− 0.7	12 13	52.21 52.14
193	45 2460	8.3 G8	50 30.278	176.92	0.24	0.00	38 31.36	598.5	12.4	+ 0.9	7 8	52.67 52.16
194	45 2473	8.8 K0	55 44.144	176.52	0.23	+ 0.05	31 53.09	554.7	12.5	− 1.0	10 12	51.95 51.95
195	45 2487	8.0 K0	17 2 27.215	175.54	0.23	+ 0.06	31 2.89	498.0	12.5	− 0.4	10	52.16
196	45 2504	6.9 K2	17 10 12.142	+175.09	+ 0.21	− 0.01	45 23 1.14	− 432.1	+12.5	− 1.2	21 21	52.32 52.35
197	45 2506	8.7 G0	10 52.768	174.98	0.21	− 0.71	23 23.41	426.3	12.5	+16.0	9 8	52.40 52.37
198	45 2509	7.4 B3	12 0.261	174.65	0.21	− 0.12	25 45.75	416.7	12.5	− 1.1	11 12	52.12 52.13
199	45 2519	8.9 F8	16 18.794	173.18	0.21	+ 0.60	38 9.66	379.7	12.4	− 5.5	6 7	52.50 52.63
200	45 2521	6.6 F0	18 23.775	174.26	0.20	− 0.36	21 24.76	361.8	12.6	+ 8.6	18 18	52.67 52.66

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
201	45° 2531	8.3 K0	17h 23m 11s.763	+173s.59	+ 0s.19	− 0s.06	45° 23′ 44″.45	− 320″.5	+12″.5	+ 1″.3	12 14	52.59 52.51
202	45 2545	8.9 F8	29 51.788	171.72	0.18	− 0.33	40 20.65	262.8	12.4	− 5.4	6 4	53.01 53.01
203	45 2573	7.3 G0	36 37.740	171.67	0.17	+ 0.02	35 3.12	204.0	12.5	+ 4.7	16 13	52.27 52.12
204	45 2620	8.2 G5	53 14.175	171.13	0.14	+ 0.41	33 40.11	59.2	12.5	+ 2.2	7	52.75
205	45 2621	8.0 A0	53 17.769	172.72	0.13	− 0.07	13 27.08	58.6	12.6	+ 0.4	9 6	52.52 52.34
206	45 2627	6.2 Mb	17 55 22.300	+172.07	+ 0.13	+ 0.12	45 21 21.36	− 40.5	+12.6	− 3.2	9 7	52.44 52.26
207	45 2635	6.2 B9	57 26.428	171.47	0.13	− 0.07	28 40.95	22.4	12.5	+ 2.5	24 24	52.52 52.51
208	45 2638	5.9 K2	58 30.380	171.35	0.12	− 0.05	30 9.78	13.1	12.5	− 3.0	18 18	52.24 52.23
209	45 2643p	7.4 B9	59 41.024	172.07	0.12	− 0.11	21 0.43	2.8	12.6	+ 1.4	17 13	52.76 52.81
210	45 2667	8.5 F0	18 8 22.085	170.94	0.10	+ 0.02	36 21.75	+ 73.2	12.4	− 1.8	12 11	52.47 52.37
211	45 2679	7.5 K0	18 12 9.556	+170.83	+ 0.10	+ 0.14	45 39 2.96	+ 106.3	+12.4	+ 0.1	27 27	52.67 52.71
212	45 2684	6.3 G0	14 6.167	173.06	0.09	− 0.81	11 33.93	123.3	12.5	−11.2	15 14	52.97 52.94
213	45 2690	7.9 A0	16 45.248	173.44	0.09	− 0.01	8 7.18	146.4	12.6	+ 0.8	31 29	52.89 52.84
214	45 2704	8.1 A0	21 37.360	173.41	0.08	0.00	11 34.76	188.8	12.5	+ 3.0	16 17	52.26 52.28
215	45 2721	8.3 A0	26 24.188	173.97	0.07	− 0.46	8 8.47	230.4	12.5	+ 2.8	11 9	52.66 52.67
216	45 2731	8.5 K0	18 29 41.241	+172.87	+ 0.06	+ 0.33	45 25 10.93	+ 258.9	+12.4	+ 0.2	12 14	52.13 52.12
217	45 2747	8.0 F0	35 47.793	172.41	0.05	− 0.10	37 38.31	311.8	12.3	+ 1.1	11 11	52.18 52.17
218	45 2777	6.8 F0	47 8.252	175.60	0.04	+ 0.26	12 10.45	409.3	12.4	+ 8.5	8 7	51.39 50.80
219	45 2797	7.9 F8	54 54.136	175.52	0.03	+ 0.15	26 21.72	475.5	12.3	+ 5.8	9 8	52.44 52.17
220	45 2807	8.7 F8	57 36.454	176.15	0.02	0.00	23 10.60	498.5	12.3	+ 1.8	16 14	51.64 51.63
221	45 2824	8.9 F5	19 2 16.858	+176.20	+ 0.01	+ 0.18	45 31 58.00	+ 538.0	+12.2	− 0.9	7 5	52.02 51.77
222	45 2842	8.9	7 57.552	177.67	0.01	+ 0.02	24 57.59	585.6	12.3	+ 0.4	9 10	51.81 51.89
223	45 2847	8.5 A0	9 5.310	176.73	0.00	− 0.16	40 3.68	595.1	12.2	+ 1.0	11 12	52.05 51.93
224	45 2865	7.3 A0	13 56.288	179.51	0.01	+ 0.10	14 48.19	635.4	12.2	− 1.0	22 23	52.24 52.34
225	45 2877	8.6 K	18 55.970	179.34	0.00	− 0.07	29 58.78	676.7	12.2	+ 0.6	13 12	51.98 52.08
226	45 2912	8.3 K2	19 28 33.893	+181.92	+ 0.00	+ 0.04	45 22 42.90	+ 755.4	+12.1	+ 2.3	8 9	52.06 52.10
227	45 2949	5.0 F2	39 17.549	184.33	0.00	+ 0.75	24 20.26	841.4	12.0	+12.2	26 23	52.16 51.94
228	45 2971	7.5 K0	44 44.966	184.83	0.00	− 0.04	36 45.29	884.5	11.9	− 0.8	25 23	52.52 52.41
229	45 3001	7.8 K0	52 12.061	188.00	0.01	− 0.09	20 19.37	942.5	11.9	+ 0.1	23 21	52.41 52.31
230	45 3025	5.8 A2	57 46.118	188.36	0.01	− 0.02	38 6.25	985.2	11.8	− 1.7	22 21	52.10 51.97
231	45 3038	7.5 A2	20 0 11.313	+190.30	+ 0.02	+ 0.28	45 20 10.63	+1003.5	+11.8	+ 2.3	17 15	51.79 51.81
232	45 3066	8.1 G5	6 32.292	191.98	0.03	− 0.12	23 48.19	1051.2	11.7	− 3.3	13 11	52.16 52.07
233	45 3113	6.9 A3	13 40.364	193.49	0.04	− 0.10	35 12.94	1103.8	11.5	+ 0.2	8 6	52.72 52.75
234	45 3119	5.9 F5	14 23.307	194.36	0.04	+ 0.05	25 31.74	1109.1	11.6	− 5.0	6 4	52.28 52.08
235	44 3414	7.5 K2	14 58.117	195.50	0.05	+ 0.03	11 0.96	1113.3	11.6	+ 1.6	5	52.69
236	45 3127s	8.8 A5	20 15 53.058	+194.64	+ 0.04	− 0.08	45 28 53.82	+1119.9	+11.6	− 1.0	8 8	52.35 52.34
237	45 3429	7.0 F5	18 11.252	196.48	0.05	+ 0.18	12 19.73	1136.6	11.6	− 2.0	19 19	52.44 52.49
238	45 3152	5.9 K0	20 27.371	195.58	0.05	+ 0.18	38 0.70	1152.8	11.4	+ 4.3	8 8	52.58 52.71
239	45 3191	7.3 B9	27 9.453	198.24	0.07	0.00	33 4.94	1200.3	11.3	− 0.5	30 25	52.44 52.37
240	45 3196	6.6 K0	28 20.550	197.88	0.06	+ 0.75	45 28.44	1208.6	11.2	+15.2	15 13	52.30 52.26
241	45 3233	6.5 B3	20 37 41.833	+202.33	+ 0.11	− 0.03	45 29 21.50	+1272.8	+11.1	+ 0.2	14 12	52.04 51.94
242	45 3245s	7.6 G0	40 39.006	202.88	0.11	− 0.58	38 44.43	1292.7	11.0	−18.4	13 12	52.44 52.33
243	45 3275	6.7 K5	45 37.777	205.72	0.13	− 0.02	23 43.22	1325.6	11.0	− 1.8	10 9	52.00 51.92
244	44 3590	7.5 A0	46 42.890	206.60	0.14	+ 0.04	15 58.39	1332.7	10.9	+ 0.1	9 8	52.60 52.59
245	44 3615	8.0 A	51 14.964	208.36	0.16	+ 0.04	16 37.34	1362.1	10.8	+ 1.5	7 7	51.48 51.76
246	45 3374	6.2 B8	21 1 2.908	+211.12	+ 0.19	0.00	45 39 1.69	+1423.7	+10.6	+ 0.1	25 22	52.26 52.39
247	45 3410	7.3 G0	5 5.646	213.43	0.22	− 0.08	28 25.82	1448.4	10.4	− 1.0	18 17	52.41 52.40
248	45 3427	7.5 B5	7 47.278	214.39	0.23	− 0.08	32 3.94	1464.6	10.3	+ 0.1	16 14	52.34 52.15
249	44 3718	6.5 B5	8 10.786	215.32	0.23	+ 0.11	17 53.03	1466.9	10.3	+ 0.9	13 10	52.28 52.48
250	44 3728	8.1	9 23.797	215.99	0.24	− 2.40	15 15.64	1474.2	10.3	−29.8	10 7	52.33 52.22

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
251	45° 3438	6.7 A0	21h 9m 27s.737	+215s.33	+ 0s.24	− 0s.08	45° 28′ 7″.79	+1474″.5	+10″.3	− 0″.6	24 21	52.54 52.52
252	45 3442	7.9 B8	10 18.944	215.61	0.24	+ 0.02	29 50.88	1479.6	10.3	− 0.4	14 11	52.35 52.36
253	45 3456	7.5 B5	11 53.380	216.60	0.25	− 0.04	24 14.59	1488.8	10.3	− 0.1	14 10	52.14 51.83
254	44 3744	7.9 K5	11 55.243	216.85	0.25	+ 0.30	19 46.03	1489.0	10.3	+ 1.6	9	51.90
255	45 3476	7.6 B9	14 9.125	217.23	0.26	− 0.03	31 20.28	1502.0	10.1	− 0.7	31 26	52.44 52.48
256	44 3825	8.5 G0	21 26 15.508	+223.22	+ 0.33	− 0.01	45 21 34.14	+1569.9	+ 9.8	− 3.7	9	51.70
257	44 3840	7.0 B5	28 8.515	224.34	0.34	− 0.02	16 26.26	1580.1	9.8	− 0.5	5 4	52.04 52.16
258	45 3584	6.6 K2	31 25.266	224.85	0.36	− 0.11	37 53.23	1597.6	9.6	− 0.2	8 7	52.43 52.40
259	44 3877	* Mc	34 8.259	227.49	0.38	+ 0.59	9 0.30	1611.8	9.6	+ 0.9	9	51.91
260	45 3637	6.5 Mb	40 13.482	229.35	0.42	− 0.07	32 13.51	1642.9	9.2	− 1.7	35 31	52.41 52.44
261	45 3680	8.0 K2	21 46 11.974	+232.19	+ 0.46	− 0.01	45 34 17.22	+1672.3	+ 9.0	+ 0.2	8 6	52.16 52.17
262	45 3721	8.5 A0	52 51.875	235.57	0.51	− 0.01	33 15.90	1703.7	8.6	− 0.3	12	51.93
263	45 3813	6.5 G5	22 6 39.433	242.80	0.61	− 0.56	29 45.89	1764.1	8.0	+ 5.1	23 18	52.09 52.05
264	44 4073	5.5 A0	11 45.576	246.13	0.65	+ 0.70	11 31.54	1784.8	7.8	+ 1.0	26 24	52.32 52.34
265	45 3919	7.8 K2	22 52.998	251.36	0.75	− 0.21	31 46.74	1827.0	7.1	− 1.1	6 7	52.24 52.69
266	45 3941	7.3 A2	22 24 54.857	+252.45	+ 0.77	− 0.25	45 32 3.20	+1834.2	+ 7.0	− 1.5	16 13	52.56 52.63
267	45 3958	8.2 K2	27 45.274	254.09	0.79	− 0.05	29 17.32	1844.1	6.9	+ 0.5	7 6	52.29 52.40
268	44 4183	7.9 K0	35 36.998	258.98	0.85	− 0.19	8 53.13	1869.9	6.4	+ 0.5	12 11	51.81 51.80
269	45 4002	7.1 F8	36 2.532	258.50	0.86	− 1.05	34 11.05	1871.3	6.3	−16.9	19 15	52.38 52.31
270	44 4209	8.3 K2	41 1.698	261.77	0.90	+ 0.06	15 58.06	1886.4	6.1	+ 1.7	7 5	51.99 51.93
271	45 4065	8.6 A0	22 47 9.008	+264.63	+ 0.95	− 0.01	45 37 57.22	+1903.8	+ 5.7	+ 1.1	11 9	51.80 51.48
272	44 4263	8.1 K0	50 58.173	267.09	0.99	− 0.02	25 37.47	1914.0	5.4	+ 0.1	21 15	51.93 52.02
273	45 4094	8.4 F8	53 55.392	268.63	1.02	− 0.16	31 29.38	1921.5	5.1	− 3.7	9 5	51.78 51.07
274	44 4307	7.9 K0	59 17.441	272.05	1.05	+ 0.26	14 28.18	1934.3	4.8	+ 2.1	9 5	51.69 51.50
275	44 4320	8.8 F5	23 1 58.636	273.61	1.08	+ 0.17	12 42.63	1940.4	4.6	+ 0.8	9 6	52.27 52.25
276	44 4347	7.1 K0	23 8 31.444	+277.31	+ 1.15	− 0.75	45 14 40.05	+1953.9	+ 4.1	−27.5	14 11	51.95 52.20
277	44 4373	6.3 B9p	15 34.818	281.40	1.21	+ 0.24	12 56.13	1966.7	3.5	− 0.9	32 29	52.37 52.48
278	44 4399	8.5 K0	21 5.451	284.33	1.26	+ 1.71	31 7.56	1975.4	3.1	− 0.5	10 8	51.40 51.32
279	44 4424	7.9 K0	26 3.207	287.32	1.31	+ 0.02	25 4.21	1982.3	2.7	− 0.4	22 20	52.19 52.14
280	45 4252	7.6 K2	29 35.157	289.26	1.35	0.00	36 47.05	1986.6	2.3	− 1.5	28 23	52.09 52.04
281	44 4454	8.0 G5	23 34 4.951	+292.12	+ 1.37	+ 0.26	45 14 22.18	+1991.5	+ 2.0	− 8.8	10 5	51.95 51.75
282	44 4464	7.8 A2	36 53.574	293.67	1.41	− 0.06	26 34.57	1994.1	1.7	− 0.9	8 7	51.90 52.06
283	44 4466	8.8 K5	37 23.641	294.09	1.40	− 0.07	10 0.46	1994.5	1.7	− 0.3	6	52.16
284	44 4519	8.8 A0	52 18.748	302.77	1.54	− 0.07	29 15.11	2003.1	0.3	+ 0.1	7 8	51.87 51.74
285	44 4540	9.0	59 24.259	306.97	1.61	+ 0.02	31 4.34	2004.2	− 0.3	+ 0.1	8 7	52.22 51.89

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.
*259, 5^m0 to 6^m7.

Part 2

Catalogue of 105

Richmond Florida Zenith Stars

Observed in the Years 1950 to 1953

Reduced Without Proper Motion

to the

Equinox 1950.0

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
1	24°	123	7.4	G5	0^h 47^m $58^s.080$	$+320^s.46$	$+0^s.97$	$-0^s.16$	25° 18′ 47″.49	+1960″.5	−5″.3	−3″.0	8	7	51.65	51.78
2	24	136	8.6	F0	51 42.827	321.55	0.99	− 0.06	26 38.97	1953.4	5.7	− 4.4	10	8	51.87	51.66
3	25	232	8.2	F2	1 21 6.841	329.58	1.07	+ 0.05	39 53.73	1880.0	8.7	− 3.8	6	4	51.93	52.29
4	25	258	7.6	F0	27 53.156	331.34	1.08	− 0.12	39 24.36	1858.7	9.4	+ 6.0	14	11	52.08	52.27
5	25	276	6.3	F5	38 30.666	333.88	1.10	+ 0.85	29 37.65	1821.9	10.5	− 4.3	12	7	52.24	52.25
6	25	295	8.0	F8	1 43 57.263	+335.47	+ 1.11	− 0.91	25 40 12.82	+1801.6	−11.1	−12.3	9	7	52.14	52.26
7	25	311	8.2	A0	48 9.888	336.44	1.10	0.00	36 15.38	1785.1	11.5	− 3.1	9	7	52.11	52.21
8	25	319	7.8	F0	51 6.492	337.07	1.11	+ 0.74	31 52.73	1773.3	11.8	− 5.6	7	5	51.96	52.23
9	25	343	7.2	G5	2 1 30.766	339.82	1.12	+ 0.21	40 51.60	1729.1	13.0	+ 0.4	7	6	51.56	51.70
10	25	349	6.0	B8	3 58.757	340.10	1.11	+ 0.12	28 1.12	1718.1	13.1	− 0.6	10	8	51 91	52.06
11	25	355	5.1	F0	2 6 34.176	+341.07	+ 1.12	+ 0.55	25 42 15.15	+1706.3	−13.5	− 3.3	6	5	52.16	52.44
12	24	325	7.0	F5	10 50.244	341.56	1.11	+ 0.14	21 50.00	1686.4	13.8	− 8.7	6	4	52.02	52.36
13	25	373	5.8	F2	12 53.881	342.33	1.12	+ 1.28	33 6.76	1676.6	14.1	− 5.8	7	6	51.59	51.73
14	25	398	7.1	F5	24 5.025	345.34	1.12	− 0.39	49 2.23	1621.0	15.2	− 3.4	8	7	51.83	51.99
15	24	381	8.0	A0	38 16.490	347.74	1.10	− 0.22	24 4.09	1545.0	16.4	− 2.5	8	8	52.12	52.37
16	25	441	6.4	A2	2 40 56.737	+348.36	+ 1.09	− 0.08	25 25 36.96	+1530.0	−16.7	− 0.2	7	6	52.14	52.37
17	25	536	6.4	K0	3 17 27.366	355.66	1.01	+ 0.09	29 2.58	1305.3	19.9	− 8.4	7	4	51.62	51.92
18	25	620	8.7	B9	45 41.215	360.78	0.92	− 0.08	38 54.31	1108.5	22.2	+ 0.5	6	5	52.00	51.98
19	25	641	7.2	A0	50 33.482	361.25	0.89	+ 0.18	32 9.05	1072.8	22.5	− 3.0	5	4	51.31	51.44
20	25	677	8.2	A0	4 3 39.556	363.24	0.83	− 0.78	35 18.75	974.3	23.4	+ 0.6	6		51.72	
21	25	703	7.8	B9	4 17 27.437	+365.33	+ 0.76	+ 0.08	25 42 31.86	+ 867.1	−24.1	− 0.8	5		52.54	
22	25	707	5.4	B9	19 32.115	365.07	0.74	+ 0.22	30 47.24	850.7	24.3	− 1.4	10		52.36	
23	25	710	7.7	F5	22 7.543	365.69	0.73	+ 0.36	38 8.95	830.2	24.4	− 0.9	7		52.00	
24	25	720	7.6	K2	34 20.766	367.00	0.66	+ 0.24	37 40.12	731.7	25.0	− 2.0	9	8	51.81	51.91
25	25	918	8.5	A	5 38 33.513	370.75	0.23	+ 0.05	29 21.98	187.2	26.9	− 1.1	11	10	52.10	52.00
26	25	941	6.9	B2p	5 40 33.651	+370.60	+ 0.22	− 0.18	25 25 4.77	+ 169.8	−27.0	+ 1.4	8		52.55	
27	25	978	6.6	K0	44 29.005	371.06	0.20	− 0.01	33 5.97	135.6	27.0	+ 0.5	7	6	51.95	52.10
28	25	1058	6.6	K0	55 47.021	371.83	0.11	− 0.32	46 26.22	36.9	27.1	− 3.1	6	4	52.21	52.28
29	25	1272	8.6	A2	6 23 1.462	370.85	− 0.09	− 0.20	32 27.59	−201.0	26.8	− 3.2	8		51.95	
30	25	1287	8.0	A0	25 39.452	371.10	0.11	− 0.21	39 13.72	223.9	26.8	− 1.9	7		51.97	
31	25	1446	7.2	K2	6 46 38.218	+369.86	− 0.25	+ 0.20	25 32 34.61	−405.0	−26.3	− 3.1	8		52.14	
32	25	1469	6.6	A2	48 53.125	370.24	0.27	− 0.20	43 25.11	424.3	26.3	− 0.4	8	9	51.95	52.08
33	25	1496	5.8	G0	52 14.175	369.24	0.29	− 0.31	26 23.89	452.9	26.2	+ 1.6	7		51.69	
34	25	1542	6.9	A2	59 2.801	368.95	0.33	− 0.09	29 54.07	510.7	25.9	+ 0.3	8		52.02	
35	25	1594	7.0	G0	7 6 31.240	369.25	0.40	− 0.97	48 44.59	573.6	25.7	−17.7	12		51.97	
36	25	1609	6.9	A0	7 9 44.925	+369.04	− 0.42	− 0.06	25 50 2.10	− 600.6	−25.6	− 1.5	14	15	52.28	52.34
37	25	1854	8.2	F5	8 5 19.189	362.25	0.71	− 0.14	41 57.36	1042.1	22.4	− 0.6	6		52.62	
38	25	1865	5.8	G5	7 26.641	361.85	0.72	− 0.53	39 37.57	1058.0	22.2	−35.0	7	6	52.54	52.45
39	25	1950	8.1	A3	31 8.078	357.48	0.80	− 0.35	24 20.18	1228.0	20.3	− 1.1	9		52.06	
40	26	1901	6.8	A5	9 4 57.479	352.06	0.91	− 0.27	49 43.36	1447.5	17.5	− 1.1	6	7	52.00	51.86
41	25	2062	8.2	A5	9 10 47.152	+350.15	− 0.91	− 0.29	25 27 41.93	−1482.3	−16.8	− 1.5	7		51.88	
42	26	1989	7.2	F0	36 20.535	344.87	0.94	− 0.04	35 36.88	1623.2	14.5	+ 1.4	21	22	52.25	52.25
43	26	1993	7.8	K0	39 29.201	344.53	0.95	− 0.17	49 8.05	1639.2	14.2	− 1.5	12		52.02	
44	26	2064	6.0	K0	10 13 54.392	335.94	0.93	− 0.80	37 13.59	1793.3	10.6	+ 2.4	8	7	52.06	52.20
45	26	2081	6.9	K0	21 2.538	334.39	0.93	− 0.15	49 20.60	1820.3	9.8	− 6.4	15		52.41	
46	26	2144	8.8	A3	10 50 0.757	+326.77	− 0.87	− 0.31	25 49 38.26	−1911.5	− 6.8	+ 1.4	13	12	52.39	52.32
47	26	2152	6.4	K0	53 51.830	325.68	0.86	− 0.20	46 3.38	1921.4	6.3	− 2.0	13	11	52.07	52.06
48	25	2335	7.5	G0	11 2 35.459	323.10	0.82	− 2.98	28 22.12	1941.7	5.4	− 7.4	7	6	52.08	52.24
49	26	2189	7.3	A2	15 1.278	319.89	0.80	− 0.47	44 2.70	1965.8	4.1	− 4.1	12	13	52.32	52.32
50	26	2238	8.1	G0	34 49.254	314.38	0.72	+ 0.09	41 48.47	1992.2	2.1	+ 1.6	10		52.36	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0. T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
51	26° 2241	8.0 G0	11h 36m 52s.090	+313s.77	− 0s.72	− 0s.73	25° 34′ 44″.96	−1994″.1	− 1″.9	− 4″.6	8	52.55
52	26 2250	6.2 K5	41 37.104	312.43	0.69	− 0.14	29 44.80	1997.8	1.4	+ 1.4	17 18	52.34 52.22
53	26 2270	7.0 K0	52 50.150	309.35	0.65	− 0.48	48 2.09	2003.3	0.3	− 0.5	9 10	52.22 52.23
54	25 2442	8.0 F8	55 29.868	308.57	0.64	+ 0.51	24 58.54	2003.9	0.1	− 1.1	10	52.33
55	26 2307	8.6 F8	12 5 27.775	305.80	0.60	+ 0.07	39 21.38	2003.7	+ 0.9	− 6.2	14 13	52.20 52.27
56	26 2323	8.4 F2	12 15 19.542	+303.00	− 0.57	− 0.19	25 50 56.81	−1999.8	+ 1.9	− 1.2	12	52.28
57	26 2345	6.4 A5	21 56.325	301.14	0.54	− 0.12	51 34.24	1995.1	2.5	− 0.8	14 15	52.30 52.37
58	26 2369	8.0 K2	33 32.924	297.95	0.48	+ 0.05	41 57.42	1982.8	3.6	− 5.3	13	52.27
59	26 2455	7.4 K0	13 21 24.470	284.85	0.27	− 0.35	48 29.63	1879.1	7.6	+ 0.4	9	52.23
60	26 2559	8.2 F5	14 20 17.289	270.25	0.04	− 0.53	46 38.01	1640.3	11.6	− 3.2	11 11	52.44 52.27
61	25 2770	6.2 F2	14 20 52.062	+270.47	− 0.04	− 1.21	25 33 49.93	−1637.4	+11.7	+ 6.6	11	52.46
62	25 2853	7.3 G5	55 11.820	263.17	+ 0.05	− 0.43	31 23.55	1446.6	13.5	+ 1.2	6	52.51
63	26 2647	8.1 F8	15 2 34.606	261.44	0.07	− 0.56	39 17.79	1401.2	13.9	− 7.3	7	52.90
64	26 2670	6.7 A0	13 31.864	258.98	0.10	− 0.01	49 35.24	1331.1	14.4	− 0.2	11 13	52.65 52.47
65	26 2685	7.4 K0	20 16.267	257.79	0.11	+ 0.27	48 6.52	1286.5	14.7	− 1.9	11 9	52.55 52.59
66	25 2908	8.1 F5	15 21 42.593	+258.29	+ 0.12	0.00	25 27 41.51	−1276.8	+14.8	− 0.9	8	52.62
67	25 2981	7.9 K0	49 22.260	253.78	0.15	− 0.18	27 12.22	1081.5	15.8	− 1.0	8	52.16
68	25 3039	7.5 K0	16 8 0.973	250.76	0.16	− 0.09	37 1.80	940.7	16.4	0.0	7	52.56
69	25 3119	9.4 G0	40 10.382	247.36	0.17	+ 0.03	31 32.59	684.1	17.1	+15.9	6 7	52.71 52.51
70	25 3137	7.9 F8	46 1.193	246.52	0.16	− 0.03	38 2.41	635.8	17.2	+ 3.4	8 9	52.25 51.94
71	25 3156	6.3 K0	16 52 59.238	+245.45	+ 0.16	+ 0.07	25 48 36.07	− 577.7	+17.2	− 2.2	21 22	52.51 52.47
72	25 3183	6.0 K0	17 0 15.602	245.54	0.16	+ 0.37	34 29.40	516.6	17.4	+ 8.8	17 19	52.28 52.41
73	25 3246	5.3 A2	18 7.438	244.41	0.15	+ 0.12	35 13.65	364.2	17.6	− 1.6	11 10	52.12 51.89
74	25 3308	7.3 K0	34 22.757	243.58	0.13	− 0.08	38 46.50	223.6	17.7	− 2.8	13 11	52.48 52.29
75	25 3344	6.9 A0	44 39.143	242.97	0.12	− 0.49	46 1.56	134.1	17.7	− 1.2	7 6	52 26 52.06
76	25 3353	5.3 K0	17 46 47.362	+243.30	+ 0.12	− 0.08	25 38 17.43	− 115.5	+17.7	− 3.9	7	52.25
77	25 3404	7.6 A0	59 32.273	243.63	0.11	+ 0.13	29 20.21	4.0	17.8	− 0.1	14	52.04
78	25 3453	6.8 K0	18 9 30.124	243.51	0.10	− 0.39	32 53.55	+ 83.1	17.7	+ 2.0	20 19	52.24 52.18
79	25 3564	7.5 G5	30 33.648	244.30	0.08	+ 0.09	27 3.44	266.5	17.6	+ 1.1	9	51.88
80	25 3581	8.5 A5	33 55.686	243.83	0.08	+ 0.03	39 47.62	295.6	17.5	− 1.0	6	52.05
81	25 3623	8.0 A0	18 44 34.209	+244.84	+ 0.06	− 0.11	25 29 2.30	+387.3	+17.4	− 1.1	7 6	52.12 52.04
82	25 3663	7.8 A0	53 38.758	244.97	0.06	− 0.16	37 45.41	464.9	17.3	− 0.4	9	52 12
83	25 3710	6.9 B8	19 1 15.183	245.16	0.06	− 0.22	45 5.18	529.3	17.1	− 2.7	22 20	52.07 51.97
84	25 3757	6.8 A0	11 50.182	246.23	0.05	− 0.14	40 18.43	618.0	17.0	− 0.5	23 20	52.46 52.33
85	25 3864	6.9 F2	30 0.953	248.48	0.04	+ 0.33	29 16.99	767.1	16.6	+ 6.2	6 7	51.76 51.88
86	25 3876	7.6 K0	19 31 58.068	+248.14	+ 0.05	− 0.03	25 41 46.28	+ 782.9	+16.5	− 2.4	13 10	51.84 51.61
87	25 4067	8.8 A3	59 10.171	251.92	0.05	+ 0.10	32 26.75	995.8	15.7	− 1.8	9	51.59
88	25 4085	8.0 K0	20 2 4.176	252.06	0.06	− 0.55	38 53.70	1017.8	15.6	− 4.8	12 13	52.04 52.16
89	25 4165	4.8 B3	13 8.655	254.20	0.06	+ 0.01	26 16.84	1100.0	15.3	− 0.3	6	51.43
90	25 4189	6.8 B3	16 9.676	254.54	0.06	− 0.18	29 28.57	1121.9	15.2	+ 2.5	11 8	52.38 52.40
91	25 4299	6.3 A2	20 33 59.625	+256.98	+ 0.09	+ 0.10	25 42 29.38	+1247.6	+14.4	+ 1.4	20 16	52.24 52.03
92	25 4324	8.6 A2	38 9.357	257.93	0.10	− 0.04	36 39.20	1275.9	14.2	− 2.5	5 4	52.01 51.86
93	25 4347	7.0 F0	41 10.659	258.40	0.10	− 0.08	38 37.86	1296.2	14.1	+ 0.5	8 7	51.48 51.32
94	25 4384	7.6 B9	46 54.998	259.80	0.11	− 0.07	29 1.38	1334.0	13.9	+ 0.7	6 4	52.98 52.93
95	25 4533	7.1 A0	21 22 34.617	266.61	0.20	+ 0.12	39 52.05	1549.7	11.9	+ 0.2	15 15	51.91 51.98
96	24 4471	6.6 B8	21 43 40.331	+271.85	+ 0.25	+ 0.06	25 21 8.05	+1660.0	+10.8	− 0.6	11 9	51.74 51.65
97	25 4621	8.0 F0	46 38.930	272.34	0.26	+ 0.31	28 34.98	1674.4	10.6	− 1.1	8	51.82
98	24 4525	7.1 A0	22 2 14.588	276.12	0.32	0.00	24 56.01	1745.5	9.6	− 1.0	12 11	52.08 52.03
99	25 4691	6.8 G5	10 52.494	277.86	0.35	− 0.36	41 39.83	1781.3	8.9	−14.3	8 7	51.78 51.66
100	25 4709	7.6 A3	16 25.032	279.46	0.37	+ 0.15	31 22.76	1803.0	8.5	− 0.3	9	52.01

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
101	25° 4730	7.1 A0	$22^h\ 23^m\ 43^s.565$	$+281^s.13$	$+\ 0^s.40$	$-\ 0^s.18$	25° 40′ 23″.02	+1830″.0	+ 7″.9	− 0″.4	9	52.04
102	25 4810	7.9 A0	44 21.464	286.63	0.48	− 0.25	32 22.92	1896.1	6.4	− 3.0	9 8	52.18 52.12
103	24 4737	6.7 K0	23 12 55.601	294.39	0.60	0.00	23 57.21	1962.1	4.0	+ 2.1	10 9	52.01 52.15
104	25 4927	6.6 K2	20 0.228	296.19	0.63	+ 0.06	38 39.10	1973.8	3.3	− 1.7	10 8	51.98 52.02
105	24 4836	7.0 F2	45 59.860	303.46	0.74	− 0.99	22 34.18	2000.5	0.9	− 2.0	16 11	52.38 52.41

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

Part 3

Catalogue of 249

Herstmonceux England Zenith Stars

Observed in the Years 1950 to 1953

Reduced Without Proper Motion

to the

Equinox 1950.0

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
1	50°	2	9.0		0h 5m 13s.115	+311s.07	+ 1s.99	s	50° 55′ 40″.66	+2003″.7	− 0″.9	″	7	7	52.43	52.31
2	50	47	8.6	A5	15 11.628	318.18	2.09	.....	50 47 48.96	1999.8	1.9	.....	6	7	52.13	52.08
3	50	72	7.2	F2	23 36.661	324.30	2.20	.....	51 0 13.62	1993.6	2.9	.....	21	19	52.01	52.10
4	50	93	7.9	A2	29 49.355	328.61	2.25	.....	50 49 41.02	1987.3	3.6	.....	8	6	51.53	51.43
5	50	115	7.8	A2	35 37.640	332.87	2.32	.....	50 59 38.86	1980.1	4.2	.....	8		52.15	
6	50	147	5.0	B9	0 45 59.246	+339.86	+ 2.38	.....	50 41 44.68	+1964.0	− 5.3	.....	9	8	51.88	51.90
7	50	165	8.3		48 48.278	342.11	2.42	.....	50 55 42.29	1959.0	5.7	.....	8	6	52.14	52.25
8	50	179	8.4		52 4.962	344.41	2.45	.....	50 55 58.79	1952.7	6.0	.....	7	6	51.66	51.76
9	50	198	7.6	B5	58 1.647	348.09	2.47	.....	50 36 36.08	1940.3	6.8	.....	8	8	51.66	51.75
10	50	212	6.6	B3	1 1 50.522	350.91	2.51	.....	50 44 31.73	1931.7	7.3	.....	12	13	52.11	52.09
11	50	228	7.0	F5	1 7 36.145	+354.86	+ 2.55	.....	50 44 50.10	+1917.7	− 7.9	.....	11	10	52.06	52.07
12	50	245	8.9	G5	12 44.583	358.11	2.58	.....	50 36 29.38	1904.1	8.6	.....	10	10	51.93	52.00
13	50	267	7.8	A2	21 8.587	364.36	2.65	.....	50 54 47.83	1879.9	9.6	.....	5		51.81	
14	50	280	8.9		24 56.933	366.55	2.66	.....	50 44 35.02	1868.1	10.1	.....	6	5	52.44	52.17
15	50	315	8.9	A0	34 0.449	373.31	2.74	.....	51 4 36.60	1838.0	11.2	.....	9	7	52.26	52.12
16	50	323	8.9	A2	1 37 14.933	+374.45	+ 2.70	.....	50 39 54.59	+1826.5	−11.6	.....	7		52.68	
17	50	352	9.1		43 46.484	379.19	2.76	.....	50 52 27.56	1802.3	12.5	.....	6		53.02	
18	50	378	8.8	B9	48 41.995	382.56	2.77	.....	50 57 7.29	1783.0	13.1	.....	6	5	52.47	52.42
19	50	390	9.0	A2	51 28.157	384.08	2.78	.....	50 51 53.88	1771.8	13.4	.....	7	6	52.24	52.15
20	50	416	8.8	A2	55 35.943	386.04	2.77	.....	50 38 7.48	1754.6	14.1	.....	9	8	51.95	52.07
21	50	455	8.2	A0	2 4 22.736	+392.12	+ 2.80	.....	50 51 37.57	+1716.3	−15.1	.....	6		51.78	
22	50	466	7.6	A0	7 22.476	393.82	2.80	.....	50 49 9.70	1702.6	15.5	.....	8		52.30	
23	50	522	6.8	F5	16 48.487	399.19	2.79	.....	50 43 46.87	1657.6	16.8	.....	7	4	52.57	53.32
24	50	541	8.6	A0	20 28.024	401.15	2.78	.....	50 40 34.41	1639.4	17.1	.....	6	6	52.87	53.17
25	50	555	8.5	F5	24 39.401	403.77	2.78	.....	50 43 55.45	1618.1	17.7	.....	7	6	52.49	52.59
26	50	587	9.1		2 31 46.878	+408.69	+ 2.80	.....	50 58 15.95	+1580.5	−18.7	.....	7	7	52.72	52.97
27	50	636	7.8	B9	45 2.360	414.95	2.72	.....	50 41 21.85	1506.6	20.2	.....	10	8	52.26	52.06
28	50	654	6.6	K0	50 52.753	419.12	2.73	.....	50 57 51.27	1472.5	21.1	.....	14	12	52.37	52.26
29	50	670	9.0	A2	53 37.549	419.37	2.68	.....	50 39 54.68	1456.1	21.3	.....	6	6	52.53	52.82
30	50	689	8.6	F8	3 0 25.389	423.24	2.66	.....	50 45 49.46	1414.6	22.1	.....	6		51.52	
31	50	706	7.2	A2	3 4 53.002	+426.36	+ 2.66	.....	50 58 33.11	+1386.7	−22.8	.....	6		51.64	
32	50	729	5.9	K0	12 36.910	429.17	2.57	.....	50 45 13.92	1337.1	23.6	.....	6	5	52.21	52.24
33	50	738	7.2	B9	16 29.846	431.15	2.56	.....	50 47 19.12	1311.6	24.0	.....	10	9	52.37	52.29
34	50	757	7.4	B8	23 1.858	433.63	2.49	.....	50 40 21.26	1267.9	24.7	.....	8	7	52.01	52.02
35	50	771	8.6	A0	27 7.116	436.31	2.47	.....	50 51 34.70	1240.0	25.3	.....	5	4	52.47	52.83
36	50	802	7.8	G0	3 38 58.935	+442.15	+ 2.37	.....	51 1 0.80	+1156.9	−26.6	.....	6		51.44	
37	50	831	7.2	F2	45 11.894	443.09	2.27	.....	50 41 19.66	1112.1	27.1	.....	6	4	51.74	51.89
38	50	849	7.6	B9	49 14.881	445.72	2.25	.....	50 54 9.42	1082.4	27.6	.....	7	6	51.74	51.70
39	50	873	8.7	A2	56 55.304	449.44	2.17	.....	51 3 58.62	1025.4	28.3	.....	8	7	51.90	52.02
40	50	896	8.6	F0	4 1 51.860	448.98	2.06	.....	50 37 28.84	988.0	28.7	.....	8		52.63	
41	50	908	7.8	B8	4 4 41.814	+450.91	+ 2.04	.....	50 48 37.78	+ 966.3	−29.0	.....	7	6	52.09	52.27
42	50	926	7.9	F5	8 50.430	453.51	2.00	.....	51 2 26.13	934.4	29.4	.....	7	6	52.13	52.16
43	50	963	7.0	K2	13 25.037	453.46	1.92	.....	50 44 35.60	898.9	29.7	.....	9	8	52.67	52.74
44	50	973	6.0	B3	16 23.616	454.71	1.88	.....	50 48 5.88	875.5	29.9	.....	9	8	52 48	52.29
45	50	986	7.1	F2	20 44.396	455.67	1.82	.....	50 43 52.77	841.2	30.3	.....	10	9	51.99	52.00
46	50	995	8.8	A	4 23 38.310	+455.86	+ 1.76	.....	50 36 24.22	+ 818.1	−30.5	.....	10	9	52.68	52.63
47	50	1016	7.7	F0	30 48.878	459.45	1.67	.....	50 54 0.94	760.4	31.2	.....	7	6	52.41	52.29
48	50	1028	8.0	K0	36 23.515	461.53	1.59	.....	51 0 37.26	715.0	31.5	.....	7	6	52.43	52.32
49	50	1051	7.8	K2	42 34.456	463.04	1.49	.....	51 0 22.49	664.3	32.0	.....	7	6	52.58	52.52
50	50	1076	8.4	B9	48 33.998	462.75	1.37	.....	50 42 23.67	614.6	32.3	.....	9		52.17	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
51	50° 1093	8.7	4h 53m 54s.313	+464s.98	+ 1s.29	s	50° 54′ 15″.37	+ 570″.0	−32″.7	″	8	52.03
52	50 1106	8.8	58 1.122	465.98	1.23	.....	50 56 13.18	535.4	32.9	.....	5	52.24
53	50 1127	9.0 A	5 4 36.234	465.85	1.10	.....	50 42 12.74	479.7	33.1	.....	5 4	52.85 52.79
54	50 1135	8.9	11 0.646	467.70	0.99	.....	50 50 51.28	425.2	33.4	.....	8 7	52.71 52.65
55	50 1149	8.0 A2	15 55.316	469.13	0.90	.....	50 58 19.24	383.1	33.6	.....	6 7	53.13 53.22
56	50 1166	8.4 F5	5 20 59.986	+469.58	+ 0.81	.....	50 56 13.08	+ 339.4	−33.8	.....	7 6	52.17 52.02
57	50 1178	8.7 A0	24 33.750	469.78	0.74	.....	50 53 56.92	308.7	33.9	.....	8 7	52.12 51.99
58	50 1184	7.6 K0	27 57.398	470.67	0.68	.....	50 59 30.63	279.3	34.0	.....	12 10	52.20 52.24
59	50 1204	8.6 A0	34 26.181	471.66	0.55	.....	51 3 39.94	223.1	34.2	.....	6 5	52.05 52.05
60	50 1218	7.6 K0	39 28.161	469.81	0.45	.....	50 40 49.05	179.2	34.2	.....	11 10	52.11 52.21
61	50 1229	8.8 B8	5 44 23.665	+471.96	+ 0.36	.....	51 0 7.17	+ 136.4	−34.4	.....	6	52.04
62	50 1240	8.4 G5	48 35.338	470.75	0.28	.....	50 45 56.77	99.7	34.3	.....	6	51.94
63	51 1139	6.9 A0	56 13.176	472.78	0.14	.....	51 4 44.96	33.1	34.4	.....	5 6	52.68 52.75
64	50 1271	9.0 G5	6 4 26.513	470.93	− 0.03	.....	50 45 52.36	− 38.9	34.3	.....	8	52.32
65	50 1285	8.7 F8	10 36.481	470.93	0.16	.....	50 47 30.41	92.7	34.2	.....	12	52.13
66	51 1176	9.1	6 15 53.032	+471.99	− 0.25	.....	51 0 33.82	−138.8	−34.3	.....	6	52.29
67	50 1297	8.1 K0	19 25.796	470.38	0.32	.....	50 46 3.40	169.7	34.1	.....	8	51.72
68	50 1316	8.2 F8	28 6.455	469.25	0.48	.....	50 40 58.13	245.2	33.9	.....	9	51.80
69	50 1329	8.0 K0	34 24.952	468.10	0.59	.....	50 35 22.59	299.8	33.7	.....	8	52.26
70	50 1340	9.1 F5	38 38.746	468.12	0.67	.....	50 40 33.26	336.4	33.6	.....	7 7	52.29 52.02
71	50 1358	8.5 F5	6 47 32.049	+466.50	− 0.83	.....	50 35 53.62	− 412.7	−33.1	.....	7 6	51.71 51.66
72	51 1258	8.0 A2	53 1.496	468.34	0.95	.....	51 4 17.33	459.6	33.1	.....	6 5	52.79 52.74
73	50 1383	8.5 A2	58 41.657	465.39	1.04	.....	50 43 27.39	507.7	32.7	.....	8	52.13
74	50 1390	9.2 A0	7 1 57.977	464.48	1.09	.....	50 40 16.51	535.3	32.5	.....	7	52.29
75	50 1405	8.2 F0	9 48.300	462.75	1.23	.....	50 38 40.02	601.1	32.0	.....	11 10	52.33 52.25
76	50 1411	8.1 A0	7 14 28.800	+461.46	− 1.30	.....	50 35 43.58	− 639.9	−31.8	.....	7 6	52.43 52.32
77	50 1449	8.3	32 58.243	456.87	1.59	.....	50 36 53.91	790.9	30.4	.....	6	52.80
78	50 1452	6.7 F5	35 34.179	456.29	1.63	.....	50 38 39.09	811.8	30.2	.....	21 18	52.48 52.72
79	50 1457	8.7 F0	38 25.310	455.67	1.67	.....	50 41 4.38	834.5	30.1	.....	9	52.05
80	50 1475	8.6 G5	46 39.887	453.30	1.79	.....	50 43 0.27	899.5	29.3	.....	12 11	51.91 51.98
81	50 1489	8.6 G5	7 52 24.010	+451.22	− 1.87	.....	50 40 33.80	− 944.0	−28.8	.....	8 6	52.75 52.98
82	51 1381	8.6 F8	56 44.347	450.38	1.94	.....	50 48 13.26	977.3	28.4	.....	10 9	52.24 52.37
83	51 1384	8.4 F5	8 0 56.841	450.28	2.02	.....	51 4 40.01	1009.3	28.1	.....	10 9	52.14 52.26
84	51 1393	8.5 F8	5 33.398	448.60	2.08	.....	51 4 59.56	1043.9	27.6	.....	6 5	52.99 52.97
85	51 1399	8.6 F0	12 10.749	445.34	2.13	.....	50 56 22.78	1092.9	27.0	.....	9	52.15
86	51 1413	8.7 G5	8 19 17.406	+443.34	− 2.23	.....	51 6 52.33	−1144.5	−26.3	.....	7	52.32
87	51 1422	8.4 A5	24 4.492	441.13	2.28	.....	51 4 21.15	1178.6	25.7	.....	11 10	51.97 52.06
88	51 1431	7.6 G0	28 16.943	438.01	2.29	.....	50 47 26.53	1208.2	25.2	.....	15 13	51.82 51.94
89	50 1556	8.4 G5	31 23.617	435.98	2.30	.....	50 38 40.84	1229.8	24.8	.....	8 6	52.14 52.15
90	51 1440	8.8 K	35 10.031	435.20	2.35	.....	50 50 24.04	1255.6	24.5	.....	6 5	51.48 51.56
91	51 1446	8.8	8 38 40.641	+433.59	− 2.39	.....	50 50 0.62	−1279.4	−24.1	.....	7 5	52.13 52.15
92	51 1454	8.2 G0	45 49.461	430.37	2.44	.....	50 51 34.74	1326.9	23.3	.....	9 7	52.15 52.17
93	51 1460	7.6 A0	53 39.010	426.91	2.50	.....	50 56 6.18	1377.4	22.3	.....	22 21	52.43 52.50
94	51 1468	8.4 G5	57 12.122	425.95	2.55	.....	51 7 31.59	1399.8	21.9	.....	6 5	51.47 51.55
95	51 1478	7.0 F2	9 1 48.267	423.18	2.56	.....	51 1 28.57	1428.4	21.3	.....	9 8	52.06 51.93
96	51 1485	8.2 G5	9 5 24.947	+421.19	− 2.56	.....	50 59 33.74	−1450.4	−20.9	.....	5	52.77
97	51 1488	6.6 A0	8 27.762	418.20	2.56	.....	50 38 43.15	1468.6	20.4	.....	15	52.23
98	51 1492	8.7 K0	12 39.742	416.94	2.60	.....	50 53 20.08	1493.3	20.0	.....	12	52.11
99	51 1494	8.6 K5	16 28.186	414.21	2.59	.....	50 42 32.18	1515.3	19.4	.....	15 13	52.19 52.36
100	51 1500p	8.8 G5	19 11.307	413.15	2.61	.....	50 49 3.03	1530.8	19.2	.....	15 13	52.08 52.14

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
101	51°	1510	9.4		9h 22m 17s.773	+411s.22	− 2s.61	s	50° 45′ 30″.80	−1548″.2	−18″.7	″	7	7	51.90	51.76
102	51	1529	8.8		34 15.960	405.09	2.66	.....	50 56 5.70	1612.5	17.3	.....	12	10	52.02	52.21
103	51	1537	8.0	G5	39 33.969	401.61	2.65	.....	50 49 1.90	1639.6	16.5	.....	15	16	52.13	52.07
104	51	1553s	7.2	G5	50 0.011	395.54	2.66	.....	50 51 26.45	1690.4	15.2	.....	11	9	51.91	52.10
105	51	1566	7.8	F2	58 37.389	389.86	2.63	.....	50 43 18.84	1729.7	14.0	.....	15	14	52.20	52.28
106	51	1572	7.4	K2	10 2 0.002	+387.99	− 2.63	.....	50 47 40.88	−1744.4	−13.5	.....	9	9	51.95	52.08
107	51	1577	7.6	A2	5 55.717	386.29	2.66	.....	51 4 0.51	1761.1	13.1	.....	21	20	52.23	52.29
108	51	1585	6.6	A3	10 33.127	382.48	2.60	.....	50 44 40.40	1780.0	12.5	.....	18	17	52.12	52.18
109	51	1597	8.2	G5	19 21.166	376.85	2.58	.....	50 44 51.25	1814.1	11.4	.....	10		52.00	
110	51	1605	6.6	F2	27 9.871	371.95	2.55	.....	50 49 34.32	1842.1	10.3	.....	8		52.60	
111	51	1606	8.9		10 30 50.355	+369.93	− 2.55	.....	51 0 31.17	−1854.5	− 9.8	.....	8		52.42	
112	51	1615	8.6		34 18.467	367.19	2.51	.....	50 48 39.59	1865.8	9.4	.....	18		52.14	
113	51	1621p	7.0	A3	39 50.846	363.99	2.50	.....	51 3 40.90	1882.9	8.7	.....	9		51.88	
114	51	1625	8.3	F2	45 50.869	359.55	2.44	.....	50 52 22.45	1900.3	7.9	.....	22	21	52.16	52.21
115	51	1648	8.4		11 2 57.905	348.10	2.34	.....	51 5 25.89	1942.5	5.8	.....	10		52.36	
116	51	1658	8.8		11 13 8.341	+340.73	− 2.23	.....	50 54 48.61	−1962.5	− 4.7	.....	6	7	52.28	52.28
117	51	1662	8.9		19 9.674	336.53	2.19	.....	50 57 44.67	1972.5	4.0	.....	8		52.38	
118	51	1663	8.5	F5	22 27.809	334.01	2.14	.....	50 46 23.59	1977.4	3.6	.....	11	12	52.26	52.26
119	51	1679	6.0	K0	35 11.142	325.09	2.02	.....	50 53 43.66	1992.5	2.1	.....	10	11	52.40	52.38
120	51	1684	8.6		40 38.284	321.19	1.96	.....	50 53 15.92	1997.1	1.5	.....	11		52.26	
121	51	1693	7.6	F0	11 43 29.670	+319.13	− 1.93	.....	50 50 28.47	−1999.1	− 1.3	.....	7	8	52.14	52.15
122	51	1707	9.3		49 34.142	314.81	1.86	.....	50 53 48.69	2002.2	0.6	.....	8	9	52.76	52.70
123	51	1733	8.0	F5	12 8 20.776	301.36	1.64	.....	50 49 32.71	2002.9	+ 1.2	.....	13	12	51.96	52.03
124	51	1777	8.9	G5	39 1.435	279.67	1.27	.....	50 41 23.39	1975.3	3.9	.....	9		52.53	
125	51	1790	9.2		48 39.946	272.84	1.15	.....	50 46 14.66	1959.2	4.7	.....	8		52.57	
126	51	1824	8.4	G5	13 13 23.334	+255.21	− 0.87	.....	51 5 47.49	−1902.4	+ 6.3	.....	8		52.19	
127	51	1829	7.7	F2	15 58.258	254.18	0.82	.....	50 42 33.08	1895.1	6.4	.....	8		52.05	
128	51	1837	8.6	F8	21 12.999	250.74	0.76	.....	50 40 15.53	1879.7	6.7	.....	8		52.34	
129	51	1846	7.1	A3	26 8.874	247.09	0.71	.....	50 50 42.63	1864.3	7.0	.....	28	27	52.51	52.52
130	51	1859p	6.8	F8	38 24.316	239.19	0.58	.....	50 46 16.37	1822.3	7.6	.....	13	12	52.51	52.52
131	51	1885	8.8		13 57 34.278	+227.04	− 0.37	.....	50 45 31.79	−1746.2	+ 8.5	.....	8	9	52.48	52.46
132	51	1892	8.6	G0	14 7 1.816	220.91	0.28	.....	50 51 39.06	1704.2	8.8	.....	6	7	52.19	52.21
133	51	1899	7.9	A0	11 7.165	218.16	0.24	.....	50 56 46.27	1685.1	9.0	.....	13	14	52.89	52.79
134	51	1906	8.1	K2	14 33.132	216.71	0.21	.....	50 45 26.37	1668.6	9.1	.....	8		52.37	
135	51	1920	9.2	G5	25 2.872	209.86	0.12	.....	50 57 46.14	1616.1	9.4	.....	8		52.61	
136	51	1929	9.0		14 30 47.517	+206.25	− 0.07	.....	51 2 53.25	−1585.9	+ 9.5	.....	8		52.49	
137	51	1936	8.9		34 13.562	204.09	0.04	.....	51 6 27.68	1567.3	9.6	.....	10		52.45	
138	51	1945	8.7	F8	42 12.006	200.72	+ 0.01	.....	50 49 32.36	1522.9	9.8	.....	7	8	52.78	52.60
139	51	1965	8.7	A0	51 29.932	195.67	0.08	.....	50 50 46.66	1468.8	10.0	.....	8	9	52.74	52.59
140	51	1970	8.6	G0	55 53.506	192.55	0.10	.....	51 3 9.47	1442.4	10.1	.....	8		53.09	
141	51	1972	7.6	A2	14 58 59.277	+192.10	+ 0.12	.....	50 46 29.73	−1423.5	+10.1	.....	13	12	52.74	52.86
142	51	1987	9.1	G5	15 9 41.557	186.22	0.18	.....	50 54 29.72	1356.0	10.3	.....	9		52.13	
143	51	1990	6.8	G5	14 18.910	183.05	0.20	.....	51 7 21.09	1326.0	10.3	.....	8		52.85	
144	50	2169	8.8	K0	19 26.240	182.90	0.21	.....	50 36 54.02	1292.1	10.5	.....	10		52.56	
145	51	2003	7.4	K5	24 2.132	180.13	0.24	.....	50 46 7.04	1261.1	10.5	.....	11	10	52.21	52.09
146	51	2013	8.4	F8	15 28 11.992	+178.68	+ 0.25	.....	50 40 54.17	−1232.6	+10.5	.....	10		52.38	
147	51	2025	8.6	K2	42 44.168	170.73	0.31	.....	51 3 50.51	1129.9	10.5	.....	8		52.77	
158	51	2032	8.1	K0	46 48.872	168.88	0.32	.....	51 6 25.32	1100.3	10.6	.....	8		52.77	
149	51	2036	8.4	A0	49 51.293	168.30	0.33	.....	50 59 5.60	1077.9	10.6	.....	7		52.52	
150	51	2050	8.4	F5	59 12.670	164.93	0.34	.....	50 57 30.81	1008.1	10.6	.....	8	9	52.63	52.72

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No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.	Epoch 1900+
151	50° 2250	9.2 K0	16h 2m 25s.490	+165s.35	+ 0s.33	s	50° 38′ 55″.28	− 983″.7	+10″.7	″	8	52.00
152	51 2061	8.3 F2	7 45.844	162.43	0.35	.....	50 51 46.80	942.7	10.6	.....	6	53.04
153	50 2269	9.1	15 55.251	160.45	0.34	.....	50 44 1.23	879.2	10.7	.....	8	52.76
154	51 2088	8.7 K0	21 32.549	157.99	0.35	.....	50 52 21.44	834.8	10.6	.....	9 6	52.74 52.55
155	51 2107	8.0 F5	27 48.545	156.17	0.35	.....	50 52 28.69	784.7	10.6	.....	7 8	52.65 52.50
156	51 2115	7.9 G5	16 32 51.974	+153.71	+ 0.35	.....	51 4 18.07	− 743.8	+10.6	.....	6 8	52.84 52.63
157	51 2125	6.9 K0	37 45.166	153.24	0.34	.....	50 55 34.84	703.9	10.6	.....	7	52.76
158	50 2322p	8.5	42 25.740	153.02	0.34	.....	50 45 28.15	665.5	10.7	.....	7	52.40
159	51 2142	7.7 K0	50 7.981	150.74	0.32	.....	50 51 19.04	601.6	10.6	.....	5 6	52.50 52.44
160	50 2352	7.3 G5	56 56.643	149.82	0.31	.....	50 46 13.54	544.5	10.6	.....	21 21	52.65 52.62
161	51 2161	7.5 K0	17 1 25.693	+147.61	+ 0.31	.....	51 0 44.54	− 506.6	+10.5	.....	12 12	52.54 52 36
162	51 2178	6.9 B9	7 3.316	147.25	0.29	.....	50 54 17.72	458.9	10.5	.....	10 9	52.29 51 94
163	50 2382	8.1 G5	15 25.414	147.40	0.27	.....	50 39 29.22	387.4	10.6	.....	7 10	52.44 52.45
164	50 2391	8.5 K0	20 0.545	145.43	0.25	.....	50 53 47.82	348.0	10.5	.....	10 11	52.41 52.33
165	50 2402	7.2 G5	23 24.434	145.97	0.24	.....	50 43 49.96	318.6	10.6	.....	18 14	52.62 52.57
166	50 2409	8.6	17 26 36.532	+146.29	+ 0.24	.....	50 36 53.95	− 291.0	+10.6	.....	5 6	52.30 52.35
167	50 2420	7.8 G5	30 21.240	145.36	0.23	.....	50 42 52.57	258.5	10.5	.....	7	52.90
168	51 2234	8.0 A3	35 34.429	143.18	0.21	.....	51 0 48.68	213.2	10.4	.....	11 10	52.46 52.44
169	50 2451	8.9	41 7.994	143.18	0.19	.....	50 56 58.30	164.8	10.4	.....	13 13	52.45 52.37
170	50 2468	5.7 A2	47 52.486	143.78	0.17	.....	50 47 31.90	106.0	10.5	.....	8 6	52.57 52.54
171	51 2268	8.1 K0	17 50 27.131	+141.73	+ 0.16	.....	51 7 30.99	− 83.5	+10.3	.....	11 10	52.70 52.71
172	50 2502	7.8 F0	58 52.273	142.78	0.13	.....	50 55 21.60	9.9	10.4	.....	9 9	52.13 52.24
173	50 2525	6.9 K0	18 5 41.620	143.47	0.11	.....	50 48 50.04	+ 49.8	10.5	.....	10 9	51.90 51.82
174	50 2534	8.2 A0	9 54.653	143.76	0.10	.....	50 46 50.03	86.7	10.5	.....	6 6	52.05 52.18
175	50 2549	7.3 F8	14 8.380	142.91	0.08	.....	50 57 13.98	123.6	10.3	.....	6 7	51.40 51.69
176	51 2354	9.0	18 18 16.810	+142.25	+ 0.07	.....	51 6 7.14	+ 159.7	+10.3	.....	9 8	52.24 52.17
177	50 2575	8.5 F5	22 23.275	144.49	0.06	.....	50 45 49.82	195.5	10.4	.....	6 8	51.73 52.16
178	50 2592	6.7 K0	26 49.733	143.44	0.04	.....	51 0 11.52	234.1	10.3	.....	15 13	52.15 52.26
179	50 2618	7.8 B5	33 11.991	143.63	0.02	.....	51 4 19.49	289.3	10.3	.....	5 3	51.97 51.89
180	50 2651	8.0 A2	40 32.676	144.46	− 0.01	.....	51 4 34.32	352.7	10.3	.....	13 12	51.95 51.89
181	50 2671	9.1	18 47 39.865	+147.25	− 0.02	.....	50 45 40.06	+413.8	+10.4	.....	6	53.18
182	50 2686	4.9 G5	51 59.163	148.57	0.03	.....	50 38 42.54	450.7	10.4	.....	16 13	52.30 52.54
183	50 2705	6.6 G5	57 44.813	149.01	0.04	.....	50 44 20.15	499.7	10.4	.....	22 19	52.43 52.31
184	50 2718	8.6	19 2 16.149	149.50	0.06	.....	50 48 6.49	537.9	10.4	.....	10 10	51.49 51.79
185	50 2731	9.0	6 26.310	149.94	0.07	.....	50 52 12.70	572.9	10.4	.....	7 7	52.88 52.58
186	50 2738	8.4 A2	19 9 33.198	+151.89	− 0.06	.....	50 38 11.29	+ 599.0	+10.4	.....	15 13	51.87 51.90
187	50 2744	8.2 A	12 22.895	151.48	0.08	.....	50 49 18.16	622.5	10.4	.....	14	52.04
188	50 2777	8.6	18 30.001	154.06	0.08	.....	50 36 28.71	673.2	10.5	.....	9 8	52.28 52.24
189	50 2789	8.4 A2	21 43.916	153.06	0.09	.....	50 56 10.03	699.7	10.3	.....	20 19	52.18 52.30
190	50 2794	8.1 G0	25 4.776	154.20	0.09	.....	50 53 4.60	727.1	10.3	.....	6 5	51.62 51.41
191	50 2812	8.5 F0	19 31 38.131	+156.30	− 0.10	.....	50 49 18.81	+ 780.2	+10.4	.....	9 9	52.27 52.26
192	50 2833	8.0 F5	37 44.639	157.17	0.10	.....	50 59 18.78	829.1	10.2	.....	15 11	51.88 51.62
193	50 2863	7.9 A0	42 44.650	159.80	0.10	.....	50 46 40.69	868.7	10.3	.....	10 11	51.59 51.60
194	50 2881	8.6	45 17.670	159.97	0.10	.....	50 53 49.25	888.8	10.2	.....	11	51.78
195	50 2904	7.7 K0	50 12.053	162.88	0.09	.....	50 38 37.84	927.0	10.3	.....	14 14	51.88 52.02
196	50 2920	7.7 A0	19 53 34.198	+163.78	− 0.09	.....	50 41 12.22	+ 953.0	+10.3	.....	14 11	52.17 52.24
197	50 2940	9.1	56 49.215	163.55	0.10	.....	50 57 6.20	977.9	10.2	.....	10 9	52.00 51.84
198	50 2980	8.4 A0	20 4 19.440	166.59	0.09	.....	50 53 9.04	1034.7	10.1	.....	8 7	52.23 52.19
199	50 2990	8.7	7 14.177	166.59	0.08	.....	51 6 8.27	1056.4	10.1	.....	7 7	52.60 52.75
200	50 3028	7.6 A2	12 22.825	168.67	0.07	.....	51 5 11.02	1094.4	10.1	.....	3 3	51.97 51.95

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No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
201	50°	3046	7.7	K2	20h 16m 9s.873	+170s.62	− 0s.07	s	50° 59′ 43″.80	+1121″.9	+10″.1	″	8		51.40	
202	50	3073	8.4	A0	22 0.237	174.75	0.04	.....	50 37 53.09	1163.9	10.1	.....	8	6	51.37	50.95
203	50	3095	7.8	A2	25 10.402	174.61	0.04	.....	50 56 26.32	1186.4	10.0	.....	11	11	51.73	51.74
204	50	3112	8.5		29 21.146	177.67	0.02	.....	50 40 10.30	1215.6	10.0	.....	10		51.84	
205	50	3132	9.0		32 33.369	177.27	0.02	.....	51 3 35.37	1237.8	9.9	.....	12		51.95	
206	50	3145p	7.8	A0	20 35 12.862	+180.04	+ 0.00	.....	50 42 53.04	+1256.0	+10.0	.....	10		51.54	
207	50	3174	8.0	G5	41 40.284	181.87	0.02	.....	50 57 47.34	1299.5	9.8	.....	8	6	52.51	52.45
208	50	3209	7.6	K5	47 59.804	186.45	0.06	.....	50 35 47.86	1341.1	9.8	.....	7	8	51.49	51.62
209	50	3232	6.0	B8	54 38.417	188.46	0.08	.....	50 52 55.51	1383.7	9.6	.....	10	8	51.83	51.62
210	50	3260	8.6	G	21 3 37.417	192.71	0.13	.....	50 57 0.23	1439.4	9.5	.....	6		52.29	
211	50	3284	8.8	A2	21 11 55.089	+198.28	+ 0.19	.....	50 38 25.08	+1489.0	+ 9.4	.....	9	8	51.87	51.76
212	50	3303	8.0	A2	16 12.863	199.21	0.21	.....	50 59 46.78	1513.9	9.2	.....	10	9	51.85	51.87
213	50	3317	8.1	A0	19 58.185	202.66	0.24	.....	50 37 25.80	1535.2	9.1	.....	11	10	51.85	51.96
214	50	3333	7.6	A2	23 41.202	203.62	0.26	.....	50 54 58.52	1555.9	9.0	.....	12	10	51.79	51.63
215	50	3355	8.8	A0	29 24.062	206.44	0.30	.....	51 1 42.46	1586.9	8.8	.....	6		52.50	
216	50	3382	7.1	K5	21 35 32.285	+210.63	+ 0.36	.....	50 50 19.78	+1619.1	+ 8.7	.....	5	4	51.42	51.11
217	50	3411	7.2	B9	40 33.757	214.26	0.40	.....	50 37 44.65	1644.6	8.5	.....	12	11	51.74	51.66
218	50	3429	9.1		44 11.967	216.23	0.42	.....	50 40 41.44	1662.6	8.4	.....	8	6	52.35	52.40
219	50	3451	7.7	F0	48 42.760	218.64	0.47	.....	50 45 52.51	1684.3	8.3	.....	9		52.25	
220	50	3486	8.8	A2	53 33.750	221.56	0.51	.....	50 45 58.07	1706.9	8.1	.....	7		52.06	
221	50	3506	8.1		21 56 11.338	+223.50	+ 0.53	.....	50 39 14.82	+1718.8	+ 8.0	.....	13	13	52.51	52.52
222	50	3522	8.4	A0	58 58.288	224.20	0.56	.....	50 59 42.55	1731.2	7.8	.....	14	14	52.19	52.20
223	50	3551	8.8	A0	22 3 37.120	227.40	0.61	.....	50 53 31.71	1751.3	7.7	.....	8	8	52.30	52.07
224	50	3581	8.8		7 7.704	229.86	0.64	.....	50 47 59.76	1766.1	7.5	.....	8	7	51.95	51.83
225	50	3616	8.2	G5	11 1.543	231.95	0.68	.....	50 56 32.21	1781.9	7.3	.....	7	5	52.16	52.15
226	50	3651	7.8	B8	22 15 40.892	+234.61	+ 0.73	.....	51 4 3.07	+1800.2	+ 7.1	.....	13	9	52.08	51.94
227	50	3673	6.6	K2	18 40.530	237.41	0.76	.....	50 43 43.43	1811.5	7.0	.....	11	10	52.45	52.44
228	50	3695	7.2	A3	21 37.519	238.80	0.79	.....	50 56 31.82	1822.4	6.8	.....	8	7	52.58	52.57
229	50	3730	7.8	B9	26 24.391	241.68	0.84	.....	51 3 1.09	1839.4	6.6	.....	5	5	52.26	52.23
230	50	3743	8.0	A0	29 36.204	243.96	0.88	.....	50 59 2.15	1850.4	6.4	.....	7	6	52.71	52.72
231	50	3767	8.0	A0	22 34 52.689	+247.76	+ 0.94	.....	50 51 5.20	+1867.6	+ 6.2	.....	14	13	51.82	51.75
232	50	3780	6.6	F5	37 28.266	249.40	0.96	.....	50 53 38.62	1875.7	6.0	.....	19	17	52.29	52.19
233	50	3797	8.8	A2	40 39.792	251.78	1.00	.....	50 46 53.00	1885.4	5.8	.....	8		52 13	
234	50	3836	6.8	G0	47 9.157	256.28	1.07	.....	50 42 49.96	1903.9	5.5	.....	10	9	51.71	51.60
235	50	3868	8.7	A0	52 37.834	260.03	1.13	.....	50 41 48.33	1918.3	5.1	.....	9	8	51.63	51.50
236	50	3898s	8.9		22 56 48.238	+262.35	+ 1.19	.....	51 2 2.57	+1928.5	+ 4.8	.....	6	5	52.37	52.32
237	50	3923	9.0	A2	23 0 48.733	265.17	1.24	.....	51 0 39.17	1937.8	4.5	.....	7	8	52.31	52.36
238	50	3946	7.4	B5	4 17.820	267.89	1.27	.....	50 48 24.70	1945.3	4.3	.....	8		51.63	
239	50	3979	9.5	A0	9 29.826	271.37	1.33	.....	50 55 4.60	1955.8	3.9	.....	4	5	52.75	52.94
240	50	4000	9.0	A2	14 34.421	275.13	1.40	.....	50 44 29.51	1965.0	3.5	.....	8		52.26	
241	50	4025	7.6	K2	23 20 27.310	+279.22	+ 1.46	.....	50 46 23.35	+1974.5	+ 3.1	.....	12		51.81	
242	50	4048	8.2	K0	25 50.388	282.75	1.54	.....	51 5 18.18	1982.0	2.6	.....	11	12	51.49	51.52
243	50	4063	9.1	B9	28 25.333	284.79	1.56	.....	50 50 22.51	1985.3	2.4	.....	7	6	52.59	52.58
244	50	4084	8.4	A0	32 15.697	287.33	1.61	.....	51 5 54.07	1989.6	2.1	.....	12	11	51.89	51.90
245	50	4099	8.1	B9	35 35.854	289.81	1.66	.....	50 57 56.33	1992.9	1.8	.....	7		51.75	
246	50	4130	8.0	A0	23 40 56.224	+293.80	+ 1.70	.....	50 37 51.50	+1997.3	+ 1.4	.....	14	13	52.02	52.04
247	50	4147	7.5	B5	44 27.637	296.17	1.75	.....	50 57 4.17	1999.7	1.1	.....	9	5	51.85	51.61
248	50	4169	7.6	K0	48 29.179	299.00	1.81	.....	51 7 12.53	2001.7	0.7	.....	22	20	52.07	52.00
249	50	4203	9.0		56 0.608	304.45	1.89	.....	51 2 41.20	2003.9	0.0	.....	6		51.93	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

Part 4

Catalogue of 173 Stars

Comprising 72 Pleiades and Perseus Stars

and 101 B Type Stars

Observed in the Years 1950 to 1953

Reduced Without Proper Motion

to the

Equinox 1950.0

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
1	57°	28	7.1	B5	0h 8m 58s.543	+315s.68	+ 2s.62	− 0s.09	57° 56′ 2″.07	+2002″.7	− 1″.3	− 0″.1	7		52.18	
2	50	46	6.1	B0	15 3.347	318.22	2.11	− 0.09	51 9 19.70	1999.9	1.9	− 0.2	10	8	51.74	51.76
3	53	82	4.9	B8	29 0.026	330.75	2.54	+ 0.48	54 14 47.82	1988.2	3.5	− 0.8	11	8	52.14	51.91
4	59	146	5.5	B9	53 45.120	361.31	3.65	+ 0.44	60 5 33.98	1949.4	6.6	− 0.3	7		51.93	
5	46	245	6.7	B8p	1 1 0.000	345.51	2.21	− 0.02	47 22 27.26	1933.7	7.0	− 0.2	11	6	51.94	51.65
6	63	149	5.5	B9	1 8 10.336	+387.40	+ 4.69	+ 0.61	63 56 15.08	+1916.2	− 8.6	− 0.8	6	7	52.48	52.37
7	57	260	5.2	F5p	16 55.096	377.67	3.57	0.00	57 58 10.05	1892.4	9.5	+ 0.1	9	8	51.60	51.56
8	63	176	6.3	A0	17 43.419	400.09	4.99	+ 0.89	64 23 47.96	1890.1	10.1	− 1.4	6	5	51.77	51.79
9	57	320	6.0	*	30 9.902	389.53	3.70	+ 0.14	58 4 15.86	1851.1	11.2	+ 0.6	16	13	52.22	52.30
10	54	396	5.5	B3	48 41.247	394.15	3.30	+ 0.24	54 54 2.73	1783.1	13.5	− 0.5	6	6	51.15	51.46
11	57	494	5.9	A2p	2 5 9.927	+419.20	+ 3.92	− 0.13	58 11 13.30	+1712.7	−16.2	+ 0.7	7	5	52.37	52.39
12	56	438	6.4	B3p	7 59.150	418.08	3.77	− 0.15	57 24 38.47	1699.8	16.5	+ 0.9	8	6	52.41	52.46
13	57	519	6.5	A0p	10 8.602	423.81	3.95	− 0.14	58 19 37.91	1689.7	17.0	+ 2.4	6	5	52.34	52.45
14	56	470	7.2	B1	13 15.613	419.47	3.67	+ 0.02	56 47 52.39	1674.9	17.1	+ 0.1	7	5	52.57	52.45
15	56	471	6.4	B1p	13 20.887	419.64	3.67	+ 0.02	56 49 26.54	1674.5	17.2	+ 0.1	7	6	51.83	51.81
16	56	522	6.7	B0	2 15 32.629	+421.63	+ 3.68	− 0.01	56 54 20.49	+1663.8	−17.5	− 0.4	6		52.33	
17	56	530	6.7	B0	15 41.970	421.89	3.69	+ 0.05	56 56 22.00	1663.1	17.5	+ 0.7	8		52.46	
18	55	588	6.8	B9p	17 13.137	417.64	3.48	− 0.17	55 40 49.81	1655.6	17.5	− 0.3	7	5	52.72	52.68
19	49	640	5.6	A0p	17 38.752	397.07	2.69	+ 0.34	49 55 24.24	1653.5	16.8	− 2.6	5	6	52.40	52.66
20	56	568	6.5	A2p	18 22.310	424.21	3.70	− 0.05	57 0 54.44	1649.9	17.9	− 0.7	7		52.43	
21	55	598	5.2	A2p	2 18 51.195	+418.53	+ 3.47	0.00	55 37 5.06	+1647.5	−17.7	+ 0.3	7		51.69	
22	56	593	7.0	B8p	19 26.607	425.65	3.73	+ 0.03	57 9 35.84	1644.6	18.0	+ 0.1	7	6	52.38	52.47
23	40	501	7.7	B	19 46.530	374.45	1.93	− 0.01	41 15 11.00	1642.9	16.0	+ 0.2	6		51.72	
24	54	535	6.5	G0p	20 22.053	417.59	3.39	+ 0.09	55 8 18.33	1639.9	17.8	− 2.2	8	6	52.06	52.08
25	55	612	6.2	B2	21 43.131	423.84	3.60	− 0.02	56 23 3.68	1633.1	18.3	+ 1.1	6	5	51.84	51.84
26	49	656	4.9	K5	2 22 16.485	+400.13	+ 2.71	+ 0.24	50 3 13.12	+1630.3	−17.3	− 1.3	8	7	51.73	51.72
27	57	568	7.3	B1	23 9.756	429.77	3.79	− 0.40	57 27 16.78	1625.8	18.7	− 1.0	7	6	51.96	51.79
28	57	576	7.3	A2p	26 21.136	432.82	3.81	+ 0.33	57 35 55.23	1609.3	19.1	+ 1.0	6		51.67	
29	54	598	5.7	B8	39 27.165	429.16	3.31	+ 0.46	54 53 38.51	1538.4	20.3	− 2.1	6		51.52	
30	56	718	6.5	F5p	45 48.264	442.89	3.62	+ 0.08	56 52 38.33	1502.2	21.7	− 0.7	10		52.04	
31	46	669	5.6	G5p	2 56 25.496	+407.13	+ 2.29	+ 0.20	47 1 19.13	+1439.2	−20.9	+ 2.5	8	7	52 45	52.36
32	51	665p	5.4	B5	57 17.544	427.49	2.84	+ 0.32	52 9 15.94	1433.9	22.0	− 2.5	7		52.24	
33	56	798	5.9	A0p	3 11 57.069	459.94	3.44	− 0.01	56 57 22.55	1341.4	25.2	+ 0.6	10	9	52.08	52.10
34	43	674	5.4	B5	14 24.873	403.59	1.94	+ 0.32	43 50 34.70	1325.3	22.3	− 2.8	10	9	52.19	52.22
35	49	899	5.3	B3	15 3.283	427.25	2.48	+ 0.32	50 2 26.59	1321.1	23.7	− 2.6	11	8	51.95	52.15
36	49	902	5.1	B3	3 15 33.370	+426.94	+ 2.46	+ 0.25	49 54 50.28	+1317.8	−23.8	− 2.5	8	5	51.91	51.70
37	48	899	5.3	B3	19 39.890	425.08	2.34	+ 0.24	49 2 10.08	1290.5	24.0	− 2.0	8		51.96	
38	33	636p	5.6	A0	21 21.651	375.05	1.30	+ 0.32	33 21 36.20	1279.2	21.3	− 2.8	7		51.62	
39	48	913	5.9	B5	22 23.634	425.87	2.32	+ 0.28	48 56 45.94	1272.2	24.2	− 2.2	7		52.12	
40	48	920	4.9	B5	24 29.053	426.52	2.30	+ 0.26	48 53 25.00	1258.0	24.4	− 2.8	8	7	52.00	52.14
41	33	656	5.6	A0	3 25 11.859	+376.70	+ 1.30	+ 0.32	33 38 8.94	+1253.2	−21.7	− 5.7	9	8	52.27	52.32
42	49	944	5.6	B5	25 16.413	430.22	2.37	+ 0.31	49 40 35.67	1252.6	24.7	− 2.6	7	8	52.17	52.36
43	49	945	4.7	B5	25 46.825	428.97	2.32	+ 0.28	49 20 15.39	1249.2	24.8	− 2.7	6		52.34	
44	47	844	6.0	B9	27 4.453	423.62	2.18	+ 0.32	47 56 0.70	1240.3	24.5	− 2.9	7	6	51.85	51.86
45	47	847	5.5	B8	28 35.927	423.91	2.16	+ 0.20	47 51 17.64	1229.8	24.7	− 2.5	9	8	51.57	51.64
46	44	734	6.3	B3	3 29 12.474	+411.90	+ 1.91	+ 0.13	44 41 14.43	+1225.6	−24.0	− 1.2	6	5	51.86	51.82
47	47	857	4.3	B5p	32 55.494	426.32	2.14	+ 0.27	48 1 41.37	1199.7	25.1	− 2.6	9	7	51.59	51.46
48	56	824	6.8	B0	33 48.292	469.97	3.14	− 0.22	56 34 32.30	1193.5	27.8	+ 0.6	9		52.08	
49	22	523	6.6	A0	35 44.343	352.06	0.86	+ 0.24	22 29 52.15	1179.9	21.0	− 4.0	8	7	51.71	51.80
50	20	602	6.4	A0	36 5.654	348.30	0.81	+ 0.06	20 45 15.25	1177.4	20.8	− 2.6	7		52.06	

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.

*9 K0 + A0.

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
51	24°	527	7.1	A0	3h 36m 8s.012	+356s.71	+ 0s.92	s	24° 32′ 29″.09	+1177″.1	−21″.3	″	7	4	51.53	51.94
52	21	492	7.3	A0	36 17.717	350.35	0.84	.....	21 40 55.25	1176.0	20.9	.....	6		51.86	
53	37	811	5.6	B5	37 52.111	390.52	1.41	+ 0.22	37 25 13.62	1164.8	23.4	− 3.0	7	6	51.89	51.88
54	24	537	7.5	A2	40 43.670	358.30	0.91	.....	24 55 26.27	1144.4	21.7	.....	7	5	51.38	51.58
55	36	742	5.6	A2	41 16.835	388.05	1.34	+ 0.40	36 18 14.00	1140.4	23.5	− 3.5	6		51.83	
56	23	505	5.4	B5	3 41 49.539	+356.64	+ 0.88	+ 0.11	24 8 1.53	+1136.5	−21.6	− 4.5	9	8	51.43	51.47
57	24	546	5.6	B8	42 10.352	357.96	0.90	+ 0.17	24 41 1.72	1134.0	21.7	− 4.6	9	6	51.79	51.75
58	24	547s	4.4	B5	42 13.557	357.11	0.89	+ 0.16	24 18 42.82	1133.6	21.7	− 4.4	8	5	51.68	51.76
59	20	624	8.1	A3	42 36.748	349.88	0.80	.....	21 5 30.57	1130.8	21.3	.....	6	5	52.12	52.13
60	23	512	8.2	B9	42 39.040	356.87	0.89	+ 0.13	24 10 50.98	1130.5	21.7	− 4.0	6		52.09	
61	23	516	4.0	B5	3 42 50.750	+356.97	+ 0.89	+ 0.17	24 12 47.15	+1129.1	−21.7	− 4.5	6		51.80	
62	22	545	8.1	A0	42 51.385	354.17	0.85	+ 0.31	22 59 32.92	1129.0	21.6	− 5.8	5	5	53.54	53.52
63	24	553	5.8	B8	42 55.413	357.42	0.89	+ 0.11	24 23 59.46	1128.6	21.8	− 4.1	6	7	53.21	53.29
64	24	556	6.5	B9	43 3.851	357.38	0.89	+ 0.13	24 22 24.64	1127.5	21.8	− 4.3	5	4	52.43	52.57
65	23	522	4.2	B5	43 21.178	356.08	0.87	+ 0.18	23 47 38.96	1125.4	21.7	− 4.4	6		52.66	
66	23	523	7.0	A0	3 43 28.500	+356.80	+ 0.88	.....	24 6 3.19	+1124.6	−21.7	.....	6	3	51.64	51.30
67	24	562	6.7	B9	44 0.294	357.50	0.88	+ 0.13	24 21 59.84	1120.7	21.8	− 3.7	6	5	51.19	51.28
68	23	537	6.8	A0	44 22.639	355.89	0.86	.....	23 39 0.74	1118.0	21.7	.....	5	6	52.76	52.93
69	24	566	7.3	A0	44 24.865	357.72	0.88	.....	24 26 7.26	1117.8	21.8	.....	7	6	52.51	52.61
70	23	538s	6.9	B9	44 26.011	356.16	0.86	+ 0.05	23 45 41.95	1117.6	21.8	− 3.3	6		53.84	
71	23	540	6.8	B9	3 44 30.583	+357.03	+ 0.87	+ 0.13	24 8 7.33	+1117.1	−21.9	− 3.9	9	7	51.29	51.26
72	22	563	5.5	B8	45 22.870	355.16	0.85	+ 0.19	23 16 8.80	1110.7	21.8	− 4.9	7	6	51.84	51.83
73	23	553	6.6	A0	45 31.069	357.32	0.87	+ 0.17	24 11 36.92	1109.7	21.9	− 5.0	7	6	51.38	51.44
74	52	714s	6.8	B0	45 40.682	452.42	2.46	− 0.03	52 30 12.42	1108.6	27.7	+ 0.5	5		52.26	
75	23	558	5.2	B8p	46 12.403	356.93	0.87	+ 0.12	23 59 7.68	1104.7	22.0	− 4.9	6		51.87	
76	22	569	7.9	A0	3 46 14.236	+353.41	+ 0.83	.....	22 27 29.53	+1104.5	−21.7	.....	5	5	52.78	52.82
77	23	561	6.6	B9	46 22.628	357.53	0.87	+ 0.13	24 13 47.28	1103.5	22.0	− 5.6	6		51.73	
78	52	715	6.9	B2	46 38.435	451.92	2.43	+ 0.07	52 19 51.70	1101.5	27.8	− 0.6	5	5	53.00	53.34
79	23	563	6.1	B8	46 45.184	356.02	0.85	+ 0.13	23 33 39.74	1100.7	21.9	− 4.8	7	6	53.01	53.19
80	23	567	7.3	A0	46 57.454	357.54	0.87	+ 0.10	24 11 54.14	1099.2	22.0	− 5.0	7		51.41	
81	23	569	6.7	B9	3 46 59.543	+356.37	+ 0.85	+ 0.25	23 41 53.56	+1099.0	−21.9	− 5.0	6		53.22	
82	24	578	7.3	A2	47 28.740	357.96	0.87	+ 0.25	24 20 42.80	1095.4	22.0	− 3.3	6		51.88	
83	23	570	6.8	A0	47 53.703	356.77	0.85	+ 0.19	23 48 42.73	1092.4	22.1	− 3.3	6	7	51.94	51.94
84	25	631	8.1	A0	48 56.142	361.76	0.91	.....	25 51 1.38	1084.7	22.5	.....	10	7	51.65	51.54
85	48	1015	5.9	K0	50 0.606	434.72	2.02	+ 0.40	48 30 11.69	1076.8	27.0	− 2.9	7		52.63	
86	52	726	6.7	Oe5	3 51 50.282	+454.91	+ 2.37	+ 0.14	52 29 44.50	+1063.3	−28.3	− 0.9	8	6	51.95	51.96
87	47	912	5.3	B5	52 21.475	432.10	1.94	+ 0.19	47 43 35.55	1059.4	26.9	− 2.8	8	5	51.60	51.35
88	50	860p	5.5	F5p	52 52.738	445.38	2.17	+ 1.00	50 33 8.99	1055.6	27.9	−12.9	6		51.71	
89	23	594	7.1	B9	55 21.510	358.09	0.83	.....	23 56 21.29	1037.1	22.6	.....	6		51.70	
90	52	771	7.1	K0	4 4 46.099	464.00	2.28	− 0.04	53 13 44.52	965.8	29.9	− 0.1	6		52.40	
91	40	912	4.9	*	4 11 28.683	+408.39	+ 1.30	+ 0.15	40 21 32.33	+ 914.0	−26.6	− 2.5	6	5	51.65	51.59
92	21	623	5.3	A0p	16 38.834	355.07	0.67	+ 0.24	21 39 15.77	873.5	23.5	− 4.0	7		51.71	
93	46	872	4.9	B3	17 55.694	433.87	1.55	+ 0.21	46 22 53.06	863.4	28.7	− 3.9	6		52.65	
94	40	1000	4.5	*	33 13.176	415.88	1.12	− 0.10	41 9 50.99	740.9	28.3	− 1.8	13		52.35	
95	48	1128	5.7	A0	37 39.872	447.26	1.40	+ 0.46	48 12 20.78	704.7	30.7	− 4.4	7	6	51.90	52.05
96	43	1043	5.2	A0	4 39 21.100	+425.41	+ 1.14	+ 0.39	43 16 18.77	+ 690.8	−29.3	− 5.1	7	6	52.01	52.17
97	43	1147	7.3	B2	55 46.880	428.11	0.93	.....	43 14 54.50	554.3	30.1	.....	8	7	51.66	51.74
98	57	874	6.2	B3	5 15 8.607	517.62	1.28	+ 0.11	58 3 58.84	389.8	37.0	− 2.2	6		52.03	
99	41	1162	5.1	B3	18 15.829	424.64	0.62	+ 0.18	41 45 24.52	363.0	30.5	− 3.5	9	7	51.60	51.76
100	28	788	6.4	B9	20 12.674	379.95	0.40	+ 0.17	28 53 27.86	346.2	27.4	− 3.1	13	12	52.29	52.16

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.
*91, G0 + A5. *94, K0 + A3.

No.	BD or CD No.	M + Sp.	R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
101	20° 948	6.8 B2	5h 22m 11s.887	+356s.71	+ 0s.31	0s.00	20° 32′ 23″.36	+ 329″.1	−25″.7	− 0″.1	8	7	52.04	52.03
102	27 914	7.7 B2	52 31.448	377.46	0.14	.....	27 42 30.31	65.4	27.5	.....	8		52.01	
103	24 1033	6.0 B3	53 52.278	367.48	0.12	+ 0.05	24 14 38.98	53.6	26.7	− 0.2	7	5	51.78	51.87
104	25 1052	4.9 B2	54 53.406	372.34	0.11	+ 0.03	25 56 58.07	44.7	27.1	− 0.3	8	7	51.69	51.78
105	27 945	6.1 B8p	57 51.844	377.09	0.09	+ 0.02	27 34 18.41	18.7	27.5	− 0.5	10	9	52.28	52.42
106	20 1233	4.7 B2p	6 0 56.932	+358.33	+ 0.07	+ 0.04	20 8 28.46	− 8.3	−25.9	− 0.8	5	4	51.46	51.56
107	48 1339	6.5 B0	2 3.900	457.05	0.03	+ 0.10	48 15 14.76	18.1	33.3	+ 0.1	6		52.27	
108	28 1008	7.4 B0	2 55.895	381.20	0.05	.....	28 56 24.40	25.6	27.8	.....	7	6	51.96	52.12
109	23 1226	5.8 B1	6 41.742	364.36	0.03	+ 0.08	23 7 24.27	58.5	26.5	− 0.4	17	15	52.20	52.16
110	23 1275	6.3 B2	13 55.631	366.04	− 0.01	+ 0.04	23 45 34.76	121.7	26.6	− 0.4	6	5	51.78	51.72
111	23 1300	7.0 B0	6 16 16.624	+365.25	− 0.03	+ 0.04	23 29 27.52	− 142.2	−26.5	− 0.9	7	5	51.68	51.93
112	28 1207	6.5 K0	38 11.855	378.11	0.22	+ 0.09	28 14 40.84	332.5	27.0	− 1.1	8		51.96	
113	61 1320	5.9 F5	12 46 29.283	259.58	1.56	+ 1.45	60 35 32.21	1963.2	+ 4.2	− 0.5	26	25	52.41	52.34
114	57 1408	4.9 F0	58 35.326	256.02	1.20	+ 1.38	56 38 7.55	1939.1	5.1	− 1.6	16	16	52.04	51.91
115	57 1425	6.7 G0	13 11 34.461	244.18	0.99	+ 1.35	56 58 22.89	1907.3	5.9	− 3.5	16		52.31	
116	55 1598s	4.0 A2	13 21 55.760	+240.10	− 0.81	+ 1.38	55 10 56.77	−1877.5	+ 6.5	− 3.6	7	6	52.18	51.98
117	55 1603	4.0 A5	23 13.555	238.92	0.79	+ 1.39	55 14 52.83	1873.6	6.6	− 2.4	23	21	52.65	52.59
118	50 2239	5.9 F0	15 57 39.048	170.13	+ 0.31	+ 0.06	50 1 21.28	1019.9	10.9	− 6.1	10	10	52.81	52.61
119	50 2457	7.3 F8p	17 43 41.270	148.13	0.17	+ 0.04	50 3 48.44	142.5	10.8	− 1.8	12	10	52.67	52.68
120	20 3674	4.3 B3	18 6 37.095	256.58	0.10	0.00	20 48 18.80	+ 57.9	18.6	− 1.2	10	9	52.17	52.01
121	56 2113	5.0 F8p	18 31 42.690	+103.49	− 0.06	− 0.11	57 0 24.70	+ 276.4	+ 7.4	− 0.7	10	8	52.65	52.55
122	23 3465	6.5 B3	46 50.963	249.08	+ 0.06	− 0.13	23 59 53.53	406.9	17.7	− 0.1	7		50.98	
123	20 4022	6.6 B3	59 13.273	258.36	0.04	+ 0.01	20 45 37.92	512.2	18.0	+ 1.4	14	13	51.78	51.72
124	22 3648	5.4 B0	19 15 36.594	253.84	0.04	− 0.03	22 56 3.16	694.3	17.4	− 0.8	7		51.15	
125	55 2215	6.5 *	30 10.082	126.92	− 0.24	− 0.07	55 37 29.36	768.3	8.4	− 1.4	7	6	53.00	52.92
126	20 4200	* G5	19 34 26.521	+262.23	+ 0.02	− 0.06	20 13 13.02	+ 802.7	+17.4	− 1.4	13		52.06	
127	20 4218	6.4 B0	38 17.121	262.23	0.02	− 0.05	20 21 36.98	833.4	17.2	− 2.5	22	19	52.32	52.17
128	28 3460	* F2p	42 48.543	240.20	0.06	− 0.03	29 8 34.60	869.2	15.6	− 0.3	6	5	51.91	51.77
129	44 3236	8.1 B0	44 3.960	187.91	0.01	.....	44 50 27.66	879.1	12.1	.....	9	3	51.95	51.64
130	40 3902	5.6 B2	48 54.261	205.95	0.05	− 0.06	40 28 17.54	917.0	13.2	− 0.9	28	22	51.60	52.61
131	27 3536	* K0	19 49 27.819	+246.00	+ 0.05	.....	27 19 52.68	+ 921.3	+15.7	.....	11	8	51.74	51.30
132	46 2793	5.5 B0	50 28.578	180.82	− 0.02	− 0.08	46 53 50.73	929.2	11.4	− 0.4	10	11	52.28	52.22
133	47 2939	5.7 B2	50 38.671	176.80	0.03	− 0.10	47 48 6.46	930.5	11.2	− 1.0	8	6	52.24	52.11
134	47 2945	6.2 B2	51 32.383	177.64	0.03	− 0.14	47 40 36.93	937.4	11.2	− 1.2	10	10	52.34	52.24
135	21 4027	6.6 B0	20 0 11.744	260.57	+ 0.04	0.00	22 0 40.38	1003.6	16.2	− 0.1	7	5	52.18	52.01
136	21 4088	6.1 B0	20 9 9.770	+262.32	+ 0.04	− 0.04	21 43 30.62	+1070.7	+15.9	+ 0.5	10	11	52.40	52.33
137	23 3944	5.4 G5	13 20.561	259.12	0.05	− 0.04	23 21 17.55	1101.4	15.6	− 1.6	6	5	53.05	52.97
138	47 3059	4.2 *	13 55.450	185.45	0.01	− 0.04	47 33 35.34	1105.7	11.0	+ 0.5	4	5	52.89	52.81
139	40 4103s	5.8 B2p	16 20.598	212.56	0.08	− 0.03	40 34 30.81	1123.3	12.6	− 0.4	15	12	52.59	52.45
140	45 3139	6.3 B1	17 13.425	192.37	0.04	− 0.09	46 9 52.86	1129.6	11.4	+ 0.8	9	6	52.28	52.27
141	43 3571	6.8 Oa	20 18 46.709	+202.36	+ 0.06	− 0.06	43 41 42.16	+1140.8	+11.9	− 1.0	9	7	52.54	52.52
142	40 4150	7.0 B0	21 31.110	213.96	0.09	.....	40 35 49.18	1160.4	12.5	.....	6	5	52.64	52.47
143	40 4165	7.4 B	24 35.050	212.82	0.10	.....	41 12 51.52	1182.2	12.3	.....	14	11	52.39	52.17
144	43 3630	7.2 B	28 52.849	204.05	0.09	− 0.12	44 8 45.65	1212.3	11.6	− 0.9	9	4	52.17	52.34
145	47 3136	6.8 B2	30 50.637	189.74	0.04	− 0.33	48 2 43.62	1226.0	10.7	− 0.9	23	22	52.56	52.42
146	56 2477	6.4 B3	20 41 58.049	+151.25	− 0.22	− 0.20	56 55 58.15	+1301.4	+ 8.1	+ 0.3	7		52.36	
147	45 3291	4.9 B2	47 13.967	204.45	+ 0.13	+ 0.01	45 55 40.17	1336.1	10.8	− 0.1	10	7	52.45	52.36
148	27 3890	* F8p	49 20.752	254.67	0.13	− 0.02	28 3 43.40	1349.8	13.5	− 0.2	16	15	52.27	52.19
149	27 3909	6.4 B3	52 14.919	254.69	0.14	+ 0.02	28 19 51.76	1368.5	13.3	− 1.0	10	9	51.41	51.27
150	48 3242	7.1 B2	52 15.486	193.66	0.10	− 0.04	49 20 33.71	1368.5	10.0	+ 0.2	7	7	51.92	51.60

Position 1950 + T = Position 1950 + T (1st Term) + T² (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.
*125 K2 + A3; *126 6m5 to 7m6; *128 6m4 to 7m1; *131 7m7 to 9m6; *138 K0 + A3; *148 5m4 to 6m3.

No.	BD or CD No.		M + Sp.		R.A. 1950	Precession 1st Term	Precession 2nd Term	P.M.	Dec. 1950	Precession 1st Term	Precession 2nd Term	P.M.	No. Obs.		Epoch 1900+	
151	46°	3111	5.8	B8p	20h 54m 8s.378	+202s.63	+ 0s.15	− 0s.06	47° 13′ 30″.98	+1380″.5	+10″.5	− 0″.3	7	6	52.36	52.31
152	44	3639	6.0	Oe5	54 48.831	211.63	0.17	− 0.08	44 43 54.29	1384.8	10.9	+ 0.7	7	5	52.08	51.85
153	54	2470	7.2	B2	21 2 25.907	173.68	− 0.01	− 0.10	55 1 50.83	1432.2	8.6	+ 0.2	9		51.78	
154	43	3877	5.1	Oe5	16 35.141	223.70	+ 0.28	− 0.01	43 44 4.93	1516.0	10.3	− 0.9	12	11	51.64	51.73
155	46	3294	7.1	B2	22 1.848	216.36	0.29	.....	46 56 57.24	1546.7	9.7	.....	17	10	51.78	51.66
156	51	3079	6.2	*	21 29 46.493	+201.57	+ 0.28	+ 0.07	52 23 54.92	+1588.9	+ 8.6	+ 0.3	4		52.17	
157	40	4648	6.5	A0	47 37.831	244.10	0.45	− 0.07	40 54 54.23	1679.1	9.3	− 0.5	8	6	52.06	52.03
158	52	3043	6.6	B2	48 15.879	212.78	0.44	− 0.07	52 27 47.42	1682.2	8.1	− 0.9	9	8	52.21	52.15
159	55	2644p	6.0	B9p	53 12.086	201.76	0.42	− 0.10	56 22 25.93	1705.2	7.3	− 0.2	8	7	52.02	51.93
160	57	2441	5.5	B0	22 0 23.508	201.72	0.47	− 0.06	57 45 31.29	1737.4	6.9	+ 0.1	19	14	52.51	52.60
161	52	3114	6.5	A3p	22 5 34.240	+222.23	+ 0.62	− 0.10	53 3 45.54	+1759.6	+ 7.4	− 0.8	7	6	52.11	52.03
162	58	2402	5.2	Od	9 48.465	203.80	0.57	+ 0.01	59 10 2.50	1777.0	6.5	− 0.9	9	5	51.77	51.26
163	51	3341	7.1	B2p	18 24.887	235.00	0.76	.....	51 36 32.83	1810.6	6.9	.....	7	6	52.27	52.36
146	48	3715	4.6	B8p	22 29.032	243.38	0.78	− 0.10	49 13 20.50	1825.5	7.0	− 0.3	7	6	52.25	52.02
165	46	3719	4.6	*	27 26.451	250.12	0.80	+ 0.03	47 27 1.93	1843.0	6.8	− 0.4	6	5	52.21	52.13
166	56	2794	6.7	*	22 28 24.722	+227.37	+ 0.89	− 0.08	56 58 7.24	+1846.3	+ 6.1	− 1.0	6		53.19	
167	48	3887	5.1	K0	54 14.049	263.10	1.11	− 0.01	49 27 58.26	1922.3	5.0	− 0.2	6	6	51.67	51.85
168	56	2923	5.5	G0p	57 58.200	252.99	1.35	− 0.06	56 40 37.01	1931.3	4.5	+ 0.8	7	6	51.75	51.76
169	24	4716	5.0	K0	23 4 40.360	292.30	0.56	− 0.06	25 11 52.94	1946.1	4.7	− 3.0	12	6	52.47	52.58
170	49	4045	6.8	A5p	4 51.066	269.48	1.26	+ 0.08	49 55 18.41	1946.5	4.3	− 0.6	6	5	52.40	52.14
171	52	3383	7.1	B0	23 8 52.288	+268.40	+ 1.39	.....	52 47 11.63	+1954.6	+ 3.9	.....	8		52.12	
172	56	3115	6.0	B0	53 2.644	301.05	2.29	− 0.11	57 8 1.83	2003.3	0.2	0.0	7	4	51.74	51.54
173	54	3082	4.9	B2	56 27.660	304.33	2.21	+ 0.09	55 28 35.69	2004.0	0.0	− 0.2	7	6	51.88	51.91

Position 1950 + T = Position 1950 + T (1st Term) + T^2 (2nd Term) + T′ (P.M.). T in centuries from 1950.0, T′ in centuries from epoch.
*156 K0 + A3; *165 K0 + A0; *166 A2p + G.

CORRECTIONS TO 347 FK3 STARS

The differences $\Delta\alpha$, $\Delta\delta$ for the 347 fundamental reference stars in the sense observation minus catalogue are listed by FK3 number. The mean epoch and the number of observations in each co-ordinate are given, together with the BD numbers.

FK3 No.	B.D.	No.	Δα	Epoch	No.	Δδ	Epoch	No.	FK3 No.	B.D.	No.	Δα	Epoch	No.	Δδ	Epoch	No.
1	28°	4	−ˢ.015	52.59	11	−″.03	53.05	11	111	40°	673	−ˢ.001	52.48	19	+″.11	52.54	20
2	58	3	−.003	52.41	13	+.11	52.33	13	112	49	857	−.005	52.67	43	−.16	52.64	38
4	45	17	−.008	52.40	33	+.12	52.47	29	1088	28	499	+.008	52.07	18	+.15	52.40	16
16	62	102	+.052	52.76	22	−.02	52.76	22	114	19	477	+.003	52.60	53	−.12	52.65	43
17	53	105	+.010	52.62	55	−.03	52.61	52	1089	20	527	−.004	52.46	31	+.06	52.60	23
19	28	103	+.007	53.00	23	−.08	52.96	24	115	77	115	−.035	52.58	37	−.12	52.66	35
21	55	139	+.016	52.69	60	+.17	52.75	55	1094	20	543	+.009	52.54	26	+.14	52.54	23
25	47	183	+.001	52.59	65	+.18	52.70	58	Nβ	84	59	−.438	52.48	42	+.07	52.55	40
27	23	106	+.006	52.71	50	−.01	52.85	40	1096	64	391	−.023	52.65	6	+.05	52.49	6
1021	40	171	+.007	52.46	42	+.11	52.66	35	120	49	917	−.006	52.74	13	+.32	52.95	10
29	63	99	−.003	52.66	13	+.05	52.59	13	122	59	660	+.005	52.37	17	+.19	52.50	15
32	59	144	+.010	52.57	16	+.05	52.70	17	124	47	843	−.007	52.73	43	−.02	52.73	37
1023	28	157	+.009	52.68	22	−.01	52.77	23	1098	34	674	−.014	52.72	22	−.10	52.67	21
Na	85	19	−.435	52.70	57	+.06	52.70	57	1103	24	529	.000	52.57	34	−.09	52.73	29
1030	54	223	+.046	52.41	24	−.10	52.36	21	129	62	597	−.023	52.64	10	+.47	52.73	9
42	34	198	−.019	52.85	11	+.03	53.05	8	131	47	876	−.028	52.98	34	+.15	53.07	32
41	78	34	+.056	52.53	60	−.09	52.61	53	134	42	815	−.013	52.73	13	+.11	52.76	10
1032	20	172	−.009	52.32	9	−.44	52.45	6	136	23	507	−.009	53.02	10	−.07	53.13	10
43	29	190	+.014	52.73	11	−.04	52.72	10	139	23	541	−.010	52.26	8	−.09	51.99	8
45	26	220	+.018	52.80	43	+.17	52.82	40	142	23	557	−.010	53.24	5	+.45	53.40	5
1035	44	287	−.013	52.39	62	+.24	52.49	54	1105	57	752	−.002	52.58	10	+.75	52.84	8
48	59	248	−.034	52.86	29	+.18	52.86	29	1106	16	523	+.010	52.39	17	+.36	52.57	17
1040	44	307	+.053	52.48	56	−.02	52.52	48	144	31	666	−.040	52.54	12	+.02	52.70	8
1045	40	332	+.006	52.42	34	−.03	52.40	26	147	39	895	−.018	52.57	18	+.05	52.60	17
52	47	467	−.008	52.52	27	−.03	52.43	23	148	35	775	−.010	52.52	19	+.16	52.45	18
1047	34	297	+.004	52.45	9	+.27	52.57	10	1112	21	585	−.007	51.98	46	−.10	52.18	40
57	49	444	−.005	52.45	19	−.40	52.39	13	1113	49	1101	−.027	52.31	15	+.18	52.36	10
1052	50	379	+.024	52.89	27	+.17	52.95	22	152	47	939	−.002	52.37	49	+.06	52.52	40
64	28	312	+.017	52.47	13	+.06	52.64	10	1116	26	686	−.011	52.11	36	−.06	52.30	29
63	62	320	+.049	52.74	9	+.31	52.72	7	1117	48	1063	−.013	52.64	39	+.21	52.79	34
66	20	306	+.004	52.74	27	+.16	52.80	24	Nc	85	63	−.338	52.28	31	−.01	52.33	30
1054	53	439	+.001	52.62	46	−.02	52.70	39	165	53	779	+.002	52.63	31	−.10	52.64	29
73	41	395	−.017	52.75	39	+.08	52.90	33	1124	42	990	−.020	52.30	14	+.17	52.39	13
74	22	306	+.012	52.70	45	+.12	52.87	36	1126	28	680	+.006	52.63	18	−.16	52.69	19
Nα	82	51	−.291	52.73	28	+.21	52.64	26	174	22	739	+.019	52.29	6	+.15	52.13	5
77	50	481	+.007	52.56	21	+.01	52.58	18	1128	49	1230	−.018	52.47	13	−.02	52.74	11
1059	24	329	+.008	52.43	24	−.28	52.50	18	173	75	189	+.009	52.64	53	+.33	52.59	51
1063	46	552	−.002	52.25	44	−.22	52.28	35	175	56	973	−.025	52.50	13	+.16	52.66	14
1068	29	417	+.018	52.66	35	.00	52.77	29	183	43	1166	−.006	52.69	20	+.19	52.72	16
89	21	362	+.024	52.52	70	+.14	52.68	55	1137	40	1142	−.015	52.24	12	+.05	52.56	10
94	27	424	−.002	52.26	28	−.10	52.29	22	184	21	751	−.009	52.70	18	−.02	52.62	21
93	48	746	−.015	52.62	21	−.09	52.77	17	185	41	1058	+.007	52.42	43	+.06	52.46	39
1077	43	566	−.008	52.58	11	+.34	52.53	10	1141	27	732	−.007	52.47	40	+.27	52.54	41
99	55	714	−.018	52.82	29	−.08	52.90	28	193	45	1077	−.011	52.47	20	−.06	52.49	19
100	26	471	+.009	52.29	25	+.03	52.34	22	Nγ	85	74	−.353	52.50	20	+.06	52.65	21
103	52	641	−.023	52.46	22	−.11	52.50	20	191	79	169	−.015	52.49	28	−.17	52.46	23
1081	20	480	+.019	52.56	26	−.01	52.76	21	1145	39	1248	−.011	52.85	11	+.33	52.66	8
105	78	103	+.034	52.38	76	+.05	52.43	70	202	28	795	−.009	52.52	24	−.18	52.62	23
108	52	654	−.009	52.45	14	+.16	52.44	10	1150	57	889	−.031	52.47	18	−.40	52.61	18
109	38	630	−.001	52.94	13	+.18	53.00	14	205	74	252	+.021	52.32	32	+.11	52.41	30

FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.	FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.
211	21° 908	−ˢ.001	52.38	19	+″.11	52.44	18	339	42° 1956	−ˢ.001	52.62	21	+″.31	52.62	21
216	49 1398	+.006	52.27	35	+.12	52.49	29	341	47 1633	+.012	52.23	24	−.06	52.38	23
Nδ	85 80	−.154	52.54	22	−.43	52.49	20	340	54 1272	+.028	52.72	15	−.21	52.72	15
1158	27 899	−.006	52.62	14	+.04	52.53	14	Nζ	84 196	+.023	52.04	26	+.06	52.10	24
1157	55 1027	−.021	52.28	10	−.18	52.32	8	1239	22 2061	+.012	52.27	9	−.01	52.27	9
225	54 970	−.035	52.62	14	−.18	52.74	13	346	43 1893	+.010	52.41	26	+.08	52.41	26
227	44 1328	−.025	52.24	11	+.25	52.20	9	1244	26 1939	−.003	52.39	30	−.17	52.55	28
1163	23 1170	+.003	52.48	18	+.32	52.55	16	358	52 1401	+.020	52.55	14	−.05	52.51	13
1168	29 1154	−.002	52.59	23	−.06	52.56	20	Ne	81 302	−.109	52.41	43	−.28	52.42	38
237	59 959	−.012	52.58	27	+.23	52.57	24	367	24 2129	+.004	52.43	29	−.15	52.43	25
241	22 1304	−.020	52.60	20	−.08	52.60	18	1255	46 1551	+.007	52.20	38	+.04	52.25	35
242	49 1488	−.017	52.10	15	+.09	52.01	13	371	26 2019	+.005	52.36	29	−.19	52.34	26
1172	42 1552	−.018	52.21	26	+.13	52.37	22	374	41 2033	+.005	52.34	37	−.05	52.40	32
1173	20 1441	−.002	52.36	30	+.08	52.44	26	1259	54 1348	+.010	52.42	33	+.30	52.49	29
248	79 212	+.015	52.45	62	−.30	52.41	56	384	24 2209	+.012	52.23	9	−.02	52.36	8
254	25 1406	+.019	52.46	17	+.20	52.38	17	383	43 2005	+.001	52.69	11	+.02	52.73	10
255	43 1595	−.014	52.28	12	−.06	51.98	9	386	42 2115	+.006	52.43	23	−.04	52.49	22
1176	48 1436	+.014	52.17	28	−.12	52.32	24	Nf	83 297	−.068	52.22	68	−.12	52.16	60
260	77 266	+.015	52.55	29	−.32	52.51	26	1271	29 2057	+.007	52.22	7	−.36	52.04	6
265	58 982	+.008	53.00	8	+.01	53.00	8	394	56 1459	+.019	52.31	9	−.35	52.31	9
1182	24 1502	+.003	52.48	11	−.15	52.58	11	395	76 393	+.035	52.37	25	−.12	52.40	23
269	20 1687	−.006	52.73	15	+.01	52.73	15	398	57 1277	+.021	52.02	13	+.18	52.11	14
1190	47 1419	−.020	52.57	33	−.03	52.59	29	1276	46 1657	−.025	52.35	30	−.01	52.44	28
276	41 1630	+.011	52.54	14	+.01	52.44	12	405	23 2253	−.004	52.42	12	−.25	52.42	12
279	22 1645	+.001	52.05	15	+.25	52.09	14	413	78 367	+.057	52.57	29	−.01	52.46	27
Nd	87 51	−.670	52.41	21	−.25	52.30	20	1282	41 2147	−.019	52.18	11	−.22	52.18	11
280	55 1192	+.024	52.54	12	.00	52.54	10	416	57 1302	−.015	52.50	31	+.16	52.53	28
1191	40 1852	−.005	52.15	32	−.14	52.38	28	420	45 1897	−.015	52.13	30	−.23	52.17	28
282	28 1385	−.010	52.68	11	−.17	52.60	12	Nη	86 161	−.152	52.48	34	+.01	52.46	31
1196	27 1424	−.008	52.06	11	−.16	52.42	8	422	21 2298	.000	52.21	18	+.13	52.21	16
1195	46 1286	+.002	52.25	20	−.07	52.25	20	424	50 1807	+.023	52.34	28	−.01	52.34	28
292	59 1103	+.015	52.45	26	+.01	52.59	25	1295	27 2021	−.021	52.53	31	−.41	52.55	29
294	24 1759	−.005	52.49	17	−.27	52.49	17	432	43 2122	+.017	52.46	42	+.12	52.46	42
295	28 1463	−.003	52.32	12	+.07	52.40	12	441	48 1966	−.008	52.51	42	+.07	52.48	41
1207	27 1499	−.015	52.47	12	+.14	52.54	10	1304	21 2358	+.016	52.54	40	+.16	52.47	38
299	47 1499	+.007	52.19	29	−.11	52.23	27	447	54 1475	+.011	52.64	21	−.05	52.64	21
1209	44 1693	−.015	52.38	22	−.45	52.46	20	Nθ	86 176	−.381	52.54	46	+.15	52.44	47
1211	25 1812	+.003	52.42	23	+.10	52.47	20	451	77 461	−.003	52.34	38	+.52	52.42	34
305	28 1532	+.009	52.58	22	+.09	52.62	20	454	78 412	+.030	52.54	38	−.04	52.58	37
307	51 1391	+.002	52.14	9	−.22	52.47	7	1314	54 1504	−.011	52.31	17	−.19	52.32	15
Nε	84 169	−.038	52.39	54	−.20	52.33	47	456	57 1363	+.001	52.38	12	+.23	52.38	12
310	76 310	+.074	52.08	28	−.29	52.17	25	458	41 2284	−.012	52.25	17	+.26	52.20	18
1217	27 1589	−.003	52.54	19	+.18	52.52	20	1316	49 2130	−.018	52.46	34	−.10	52.40	34
314	43 1815	−.013	52.44	24	+.18	52.57	22	1318	26 2337	−.001	52.49	33	−.23	52.57	31
321	20 2109	+.007	52.42	20	−.10	52.50	19	466	21 2424	+.018	52.42	17	−.34	52.30	15
323	53 1272	+.039	52.46	32	+.07	52.65	27	467	59 1444	+.036	52.52	27	+.13	52.58	26
1225	46 1422	+.010	52.41	24	+.11	52.41	24	470	42 2321	+.003	52.48	34	−.10	52.54	31
1228	21 1895	−.002	52.54	17	+.08	52.58	18	1323	23 2475	+.026	52.23	15	−.13	52.23	15
328	29 1824	−.005	52.37	20	−.37	52.42	20	1327	46 1817	−.025	52.39	47	+.02	52.32	45
335	48 1707	+.002	52.41	38	+.46	52.42	37	1332	28 2156	+.009	52.67	26	+.03	52.65	25

FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.	FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.
483	56° 1627	−ˢ.030	52.50	34	−″.14	52.47	34	627	57° 1702	−ˢ.003	52.60	21	+″.16	52.69	21
1338	46 1847	+.015	52.20	18	−.11	52.14	17	1440	24 3069	−.012	52.72	27	−.25	52.70	25
1339	21 2487	+.039	52.21	9	−.08	52.31	8	Ng	82 498	+.036	52.33	41	−.16	52.37	40
492	28 2193	+.013	52.36	23	+.06	52.27	21	1448	44 2652	+.003	52.76	44	+.08	52.70	52
494	41 2380	−.012	52.59	40	−.08	52.55	38	636	40 3103	−.017	52.64	48	−.14	52.63	54
1346	40 2647	+.007	52.66	34	+.10	52.64	33	641	25 3221	−.001	52.93	17	+.17	52.99	15
497	55 1598	−.001	52.77	19	+.09	52.74	18	650	48 2517	−.014	52.71	48	+.05	52.68	49
1353	44 2285	+.017	52.78	31	−.10	52.69	31	1460	26 3034	+.013	52.68	21	+.02	52.60	18
Nι	83 397	−.224	52.56	67	+.04	52.67	58	653	52 2065	−.008	52.60	20	+.16	52.73	21
1358	26 2494	+.011	52.42	13	−.27	52.50	12	1462	41 2850	+.025	52.77	28	+.23	52.76	33
509	50 2027	−.038	52.39	15	−.02	52.39	17	663	46 2349	−.010	52.68	56	.00	52.77	57
517	28 2287	+.014	52.72	25	+.07	52.70	24	667	27 2888	−.002	52.64	25	−.66	52.67	26
1368	44 2325	+.004	52.65	37	−.17	52.65	35	1465	20 3570	+.038	52.64	14	+.41	52.71	14
522	25 2737	.000	52.74	18	−.12	52.79	16	Nh	86 269	−.059	52.66	20	+.20	52.56	19
524	78 478	−.001	52.41	30	+.20	52.50	24	675	76 667	−.010	52.31	29	+.12	52.31	27
528	52 1784	−.018	52.68	18	−.05	52.76	17	671	56 2033	−.018	52.55	20	+.13	52.61	15
527	46 1949	−.016	52.58	23	−.01	52.50	22	1468	26 3120	+.027	52.29	8	−.28	52.44	9
531	52 1804	−.005	52.65	35	+.05	52.64	34	676	51 2282	+.011	52.72	25	+.10	52.72	25
1379	76 527	+.030	52.54	52	−.10	52.52	44	674	29 3156	−.004	52.54	21	−.01	52.44	19
1380	30 2536	−.018	52.86	29	+.07	52.81	30	681	28 2925	−.004	52.68	41	−.32	52.72	39
540	45 2204	+.011	52.67	32	.00	52.66	34	684	42 3035	+.013	52.63	43	+.07	52.60	43
1383	27 2413	−.009	52.65	27	−.12	52.66	26	690	21 3411	−.006	52.49	45	−.04	52.41	40
Nκ	83 431	−.170	52.48	53	−.18	52.46	53	1479	29 3259	+.062	52.64	46	−.22	52.60	41
1392	22 2764	−.024	52.92	13	+.14	53.02	11	Nμ	83 536	−.148	52.52	48	+.22	52.49	46
555	40 2840	+.008	52.59	15	+.17	52.59	15	700	77 699	−.030	52.21	25	−.23	52.26	21
557	27 2447	+.012	52.80	15	−.09	52.79	16	1483	46 2508	+.006	52.52	18	+.07	52.22	19
1395	48 2262	−.017	52.47	21	+.08	52.43	20	703	20 3926	+.023	52.57	24	.00	52.61	21
1397	55 1730	−.004	52.78	16	+.08	52.78	16	1488	26 3349	−.023	52.83	16	−.43	52.73	14
1396	25 2873	+.001	52.62	17	+.33	52.57	16	1492	52 2280	−.027	52.59	31	+.30	52.70	29
1400	21 2755	+.011	52.65	20	+.15	52.56	20	1494	75 682	−.019	52.98	30	−.33	53.06	23
572	29 2670	−.005	52.52	37	+.08	52.74	36	711	43 3117	−.011	52.64	26	−.02	52.58	26
573	41 2609	+.002	52.61	42	−.21	52.54	39	1498	28 3193	−.003	52.64	55	−.29	52.65	50
578	27 2512	−.008	52.65	37	−.12	52.67	35	726	53 2216	+.004	52.70	54	+.11	52.78	49
580	40 2907	+.010	52.87	19	+.09	52.91	22	1506	44 3133	+.012	52.66	46	+.02	52.61	48
1412	47 2253	+.005	52.51	26	−.10	52.56	23	734	79 628	−.070	52.08	33	−.11	52.10	28
590	78 527	−.059	52.64	28	−.21	52.62	23	1508	24 3759	+.004	52.77	35	−.03	52.72	34
Nλ	83 453	−.110	52.87	17	+.02	52.79	18	733	51 2605	−.019	52.52	42	+.03	52.46	36
1416	42 2648	+.029	52.70	30	+.07	52.70	30	732	27 3410	+.011	52.52	22	+.27	52.52	22
593	27 2558	+.015	52.53	22	+.01	52.49	21	738	49 3062	+.020	52.71	58	+.09	52.66	53
595	55 1793	+.045	52.74	28	+.18	52.71	27	1515	25 3933	+.009	52.79	53	+.04	52.82	48
601	45 2376	.000	52.46	22	+.10	52.35	26	750	52 2572	−.001	52.97	45	+.02	52.99	38
606	76 594	−.002	52.43	51	−.03	52.44	49	1523	27 3587	+.010	52.85	42	−.10	52.85	35
1425	23 2916	+.015	53.05	15	+.13	52.98	13	Nν	84 451	+.031	52.44	31	+.18	52.44	29
608	46 2169	−.022	52.86	27	+.13	52.74	27	759	77 764	−.005	52.20	39	−.19	52.16	37
612	76 596	−.040	52.96	17	+.15	53.08	16	757	46 2882	−.003	52.60	30	−.06	52.53	26
614	55 1845	−.026	52.62	25	−.04	52.50	25	758	56 2376	−.020	52.62	8	+.22	52.75	8
618	21 2934	+.018	52.81	30	−.04	52.83	28	760	24 4075	−.003	52.71	16	−.03	52.64	16
621	42 2724	−.011	52.61	33	−.01	52.55	35	765	39 4159	+.003	52.60	61	+.24	52.61	53
623	77 627	+.045	52.38	26	−.09	52.37	25	1539	20 4658	+.024	52.60	51	−.14	52.59	46
1434	49 2531	−.031	52.56	38	−.36	52.57	41	777	44 3541	−.005	52.48	67	+.15	52.49	59

FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.	FK3 No.	B.D. No.	Δα	Epoch	No.	Δδ	Epoch	No.
1544	52° 2799	−ˢ.021	52.46	40	+″.27	52.41	34	1593	78° 801	+ˢ.049	52.03	19	−″.15	52.10	18
Nk	81 718	−.063	52.32	41	−.19	52.43	37	1594	75 836	+.024	52.28	20	−.41	52.21	19
786	27 3911	+.006	52.72	44	−.26	52.82	40	857	29 4741	+.002	52.72	26	−.11	52.78	20
788	40 4364	−.004	52.38	52	−.32	52.46	49	858	41 4594	−.006	52.41	34	−.20	52.28	28
1549	21 4424	−.003	51.75	12	−.22	51.67	11	859	22 4709	+.007	52.78	45	−.07	52.78	34
1551	46 3133	−.015	52.30	81	+.15	52.32	75	862	23 4615	+.001	52.71	52	−.20	52.65	44
792	43 3800	−.010	52.53	40	+.06	52.54	37	No	83 640	+.074	52.50	37	−.36	52.46	35
795	77 800	−.084	52.66	27	+.19	52.81	25	869	41 4664	−.011	52.75	39	−.18	52.67	34
1560	52 2913	−.017	52.61	47	+.31	52.68	44	870	27 4480	−.004	52.74	33	−.21	52.82	24
807	45 3558	−.021	52.51	40	−.11	52.49	36	1604	48 3944	−.023	52.58	31	−.39	52.54	29
1565	23 4325	+.004	51.92	8	+.26	52.16	8	875	56 2966	−.003	52.65	35	−.17	52.65	31
1568	44 3865	−.015	52.35	46	−.15	52.34	41	880	22 4810	+.006	52.56	39	+.03	52.61	38
811	39 4612	+.007	52.52	53	−.24	52.56	45	881	22 4833	+.007	52.60	42	−.07	52.67	38
813	56 2617	−.016	52.73	34	+.13	52.94	27	890	45 4283	−.004	52.66	35	−.17	52.61	27
821	48 3504	−.009	52.54	52	+.22	52.48	47	891	42 4720	−.009	52.48	12	+.07	52.47	11
1575	29 4525	+.015	52.83	28	−.09	52.80	26	893	76 928	+.133	52.39	27	−.04	52.42	24
823	25 4635	+.003	52.57	47	−.23	52.53	40	1619	43 4522	−.002	52.67	46	+.05	52.65	39
1579	20 5046	+.022	52.67	37	+.15	52.67	33	1622	45 4321	−.014	52.43	68	−.13	52.46	59
831	24 4533	−.001	52.51	49	−.25	52.50	43	899	56 3111	−.021	52.58	12	+.04	52.76	10
836	57 2475	−.007	53.02	28	−.08	53.05	23	Nπ	82 743	−.044	52.54	64	−.66	52.56	58
Nξ	85 383	−.371	52.36	76	+.18	52.28	67	1628	21 4999	+.002	52.30	9	−.41	52.88	7
844	51 3358	+.013	52.50	23	+.24	52.34	18	1629	24 4865	−.004	51.64	9	−.12	51.90	8
1589	26 4439	+.013	52.18	13	+.03	52.07	14								
847	57 2548	+.002	52.87	7	+.03	52.52	4								
848	49 3875	+.006	52.52	17	+.38	52.48	14								