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MEASURES OF THE RADIAL VELOCITIES OF FOURTEEN STARS

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BOSS 154

($\alpha = 0^h 40^m \cdot 5$, $\delta = +54^\circ 46'$, spectral type A, mag. 5.5)

Plate	Date	Julian Day	Velocity
	1917		
8262	Aug. 6.....	2,421,447.832	- 7.4
8298	Sept. 12.....	484.790	-17.4
8309	Sept. 24.....	496.852	- 2.5
8324	Oct. 15.....	517.782	-12.3
8368	Nov. 29.....	562.617	-14.3
	1918		
8405	Jan. 3.....	597.517	- 3.2

Professor Frost has three measures of this star which show a range of 40 km. The first of his plates shows both components, the velocity from the main component being -24 km., and that of the other +115 km. Only one component was shown by our plates.

1 PERSEI

($\alpha = 1^h 45^m \cdot 4$, $\delta = +54^\circ 39'$, spectral type B3, mag. 5.49)

Plate	Date	Julian Day	Velocity
	1914		
6304	Aug. 24.....	2,420,369.875	-37.3
6339	Sept. 4.....	380.873	-13.0
6359	Sept. 11.....	387.849	- 7.2
6379	Sept. 15.....	391.737	-45.2
6402	Sept. 18.....	394.770	-36.8
6442	Sept. 28.....	404.809	+28.7
	1916		
7782	Aug. 14.....	2,421,090.817	-17.4
7791	Aug. 16.....	092.847	-67.8

In *Ap. J.*, XXXV, 172, are given four observations by Adams having a range of 100 km. The spectrum is very poor and the probable error of a plate large.

 σ HYDRÆ

($\alpha = 8^{\text{h}} 33^{\text{m}} \cdot 5$, $\delta = +3^{\circ} 41' \cdot 5$, spectral type K5, mag. 4.54)

Plate	Date	Julian Day	Velocity
	1917		
8092	Mar. 2.....	2,421,290.672	+18.8

Campbell's "Observed Velocity" (*L.O.B.*, VII, No. 229) is +27.8.

 η HYDRÆ

($\alpha = 8^{\text{h}} 38^{\text{m}} \cdot 0$, $\delta = +3^{\circ} 46'$, spectral type B3, mag. 4.32)

Plate	Date	Julian Day	Velocity
	1917		
8108	Mar. 12.....	2,421,300.632	+26.0
	1918		
8457	Feb. 21.....	646.648	+33.4
8459	Feb. 26.....	651.567	+22.2
8465	Mar. 3.....	656.686	+37.3
8483	Mar. 28.....	681.593	+26.9
8491	Apr. 4.....	688.600	+22.0
	Mean.....		+28.0

Frost and Adams publish three measures of this star in *Astrophysical Journal*, XIX, page 155, having a range of 22 km.—from +4 to +26.

 α HYDRÆ

($\alpha = 9^{\text{h}} 22^{\text{m}} \cdot 7$, $\delta = -8^{\circ} 14'$, spectral type K2, mag. 2.2)

Plate	Date	Julian Day	Velocity
	1917		
8090	Mar. 2.....	2,421,290.626	-19.7
8091	Mar. 2.....	290.637	-19.8
8104	Mar. 9.....	297.622	-9.3
8105	Mar. 9.....	297.634	-15.6
	1918		
8445	Feb. 17.....	642.658	-9.3
8446	Feb. 17.....	642.669	-6.1
	Mean.....		-13.3

In *A. N.*, 196, p. 389, Hnatek publishes seven observations having a range of 9 km.—from +10.8 to +19.8. Campbell in *L.O.B.*, VII, No. 229, gives the "Observed Velocity" as -3.5.

26 URSÆ MAJORIS

($\alpha = 9^{\text{h}} 29^{\text{m}} \cdot 0$, $\delta = +52^{\circ} 25'$, spectral type A, mag. 4.65)

Plate	Date	Julian Day	Velocity
	1918		
8474	Mar. 17.....	2,421,670.671	+23.8
8484	Mar. 28.....	681.634	+19.5
8492	Apr. 4.....	688.640	+26.3
	Mean.....		+23.2

‡ 36 LEONIS

($\alpha = 10^{\text{h}} 11^{\text{m}} \cdot 1$, $\delta = +23^{\circ} 55'$, spectral type F, mag. 3.65)

Plate	Date	Julian Day	Velocity
	1917		
8127	Mar. 26.....	2,421,314.731	-17.3

Campbell (*L.O.B.*, VI, No. 199) gives six measures ranging from -5.5 to -26.7 .

BOSS 2802

($\alpha = 10^{\text{h}} 27^{\text{m}} \cdot 5$, $\delta = +40^{\circ} 57'$, spectral type F, mag. 4.84)

Plate	Date	Julian Day	Velocity
	1918		
8516	Apr. 25.....	2,421,709.619	+47.7
8519	May 1.....	715.625	+21.6

Campbell gives as the "Observed Velocity" of this star $+18$ (*L.O.B.*, VII, No. 229).

§ URSÆ MAJORIS

($\alpha = 11^{\text{h}} 12^{\text{m}} \cdot 9$, $\delta = +32^{\circ} 6'$, spectral type G, mag. 4.41)

Plate	Date	Julian Day	Velocity
	1918		
8497	Apr. 9.....	2,421,693.628	-29.9
8515	Apr. 25.....	709.565	-27.0

Campbell and Wright (*Ap. J.*, XII, p. 254) give ten measures ranging from -21.9 to -8.4 . Küstner gives four measures (*A. N.*, 4750), range -22.5 to -16.4 . Campbell's "Observed Velocity" (*L.O.B.*, VII, No. 229) is -16 .

12 COMÆ

($\alpha = 12^{\text{h}} 17^{\text{m}} \cdot 5$, $\delta = +26^{\circ} 24'$, spectral type Gp, mag. 4.78)

Plate	Date	Julian Day	Velocity
	1917		
8172	May. 18.....	2,421,367.670	-18.9

This star is announced a binary in *L.O.B.*, VI, 182, from five measures ranging from -2.6 to -20.2.

12 H DRACONIS

($\alpha = 12^{\text{h}} 17^{\text{m}} \cdot 5$, $\delta = +62^{\circ} 55'$, spectral type A2, mag. 5.13)

Plate	Date	Julian Day	Velocity
	1917		
8128	Mar. 26.....	2,421,314.792	+ 2.8
8156	Apr. 23.....	342.813	+17.6
8161	Apr. 25.....	344.647	+18.8
8163	May 3.....	352.814	-23.7
8180	May 27.....	376.718	-15.2
8184	May 29.....	378.691	-31.8
8188	May 30.....	379.768	-14.6
8193	June 5.....	385.764	- 2.9
8198	June 16.....	396.755	+ 2.7
8211	June 27.....	407.761	- 8.1
8216	July 5.....	415.600	+ 3.6
8223	July 15.....	425.635	-16.8
	1918		
8488	Apr. 2.....	686.866	-17.0
8507	Apr. 19.....	703.797	-11.7
8514	Apr. 24.....	708.818	+21.5
8531	May 28.....	742.654	-27.6

A period of 24.39 days suits all the above observations with the exception of No. 8488 which is dependent on the measure of one line only. This period also suits four Allegheny measures published by Jordan.

24 CANIS VENATICORUM

($\alpha = 13^{\text{h}} 30^{\text{m}} \cdot 4$, $\delta = +49^{\circ} 31' \cdot 6$, spectral type A3, mag. 4.63)

Plate	Date	Julian Day	Velocity
	1915		
6910	Apr. 7.....	2,420,595.844	- 9.7
	1916		
7668	May 25.....	2,421,609.618	-31.4

Lee gives eight observations (*Ap. J.*, XXXIX, p. 40) in all of which he has measured both components. Campbell gives -19 as the "Observed Velocity" in *L.O.B.*, VII, No. 211, and -16 in No. 229 of the same volume, from more observations.

70 HERCULIS

($\alpha = 17^{\text{h}} 16^{\text{m}} \cdot 8$, $\delta = +24^{\circ} 35' \cdot 9$, spectral type A, mag. 5.12)

Plate	Date	Julian Day	Velocity
	1917		
8227	July 16.....	2,421,426.657	-35.4
	1918		
8502	Apr. 14.....	698.818	+16.4
8513	Apr. 24.....	708.764	+ 5.3
8526	May 20.....	734.751	-22.1

Adams gives the results of three Mount Wilson observations in *Astrophysical Journal*, vol. XXXV, page 177. His velocities are -18, -26, and -3 km. per second.

BOSS 5102

($\alpha = 19^{\text{h}} 52^{\text{m}} \cdot 9$, $\delta = +38^{\circ} 15'$, spectral type B3, mag. 4.9)

Plate	Date	Julian Day	Velocity
	1917		
8255	Aug. 2.....	2,421,443.771	-24.3
8273	Aug. 21.....	462.642	-39.0
8283	Sept. 6.....	478.620	-26.7
8293	Sept. 9.....	491.641	-40.0
		Mean.....	-32.5

Campbell, in *L.O.B.*, VI, No. 195, gives the velocity of this star as -35.0 km. per second.

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