DEPARTMENT OF THE INTERIOR
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HON. CHARLES STEWART, *Minister* W. W. CORY, C.M.G., *Deputy Minister*

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SEISMOLOGY

No. 1

REPORT OF THE SEISMOLOGIC DIVISION FOR 1923

BY

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CONTENTS

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REPORT OF THE SEISMOLOGIC DIVISION FOR 1923

GENERAL INTRODUCTION TO VOLUME VII

The seismologic publications resulting from the work done at the Dominion Observatory, Ottawa, have been printed in various journals, in reports other than the *Publications of the Dominion Observatory* (hereafter referred to briefly as the *Publications*), and in scattered numbers of these *Publications*. They were written by Dr. Otto Klotz, Ernest A. Hodgson, or W. W. Doxsee. All of those by Mr. Doxsee have appeared in the series but those by Dr. Klotz and by Mr. Hodgson have not. As no complete list of these papers has been previously compiled, it seems worth while to make one now. The list has been divided into three parts—The Seismologic Papers of Dr. Otto Klotz, not appearing in the *Publications;* The Seismologic Papers of Ernest A. Hodgson, not appearing in the *Publications;* and the Seismologic Numbers, appearing previous to 1924, in the *Publications*. They are printed as an appendix to this number.

It is planned that the seismologic papers which appear hereafter as part of the series of *Publications* are to be confined to a single volume until that is filled. Then the next unopened volume will be reserved for seismology, till filled—and so on.

It may be pointed out here that *The Location of Epicentres, 1920*, by W. W. Doxsee, M.A., Vol. VIII, No. 2, 1922, was published at the time this scheme was being planned but too soon to be held for Vol. VII, which, it had been decided, was to be reserved for seismology. Thus the locations for 1920 appear in Vol. VIII, while the locations for 1921, next to be issued, will be published as a part of Vol. VII. However, a start had to be made and it was felt that all the papers in seismology should be put into the same volume after 1924, regardless of this single, apparently anomalous, instance of numbering.

A publication is now being prepared giving general details of the work done in seismology, at the Dominion Observatory, from the time the first seismograph was installed until 1924, and giving full details of the system of recording and office management now in use. An outline will be given of the records now on hand, their nature and quality, and a report on the series of records at present being compiled will be included. It is planned to make the article very detailed, in order that the material now available may be made known to any whose researches may require it and to act as a suggestion to others, as well as to prompt suggestions from others as to changes or improvements likely to add to the value of the co-operative work now being carried on by so many seismologic stations.

The report which follows for 1923 is the first of a series of annual reports to appear along with other papers in the seismologic volumes of the *Publications*. Each will outline the work done in seismology during the year. Changes deemed advisable in the system of office management and in the programme of recording will be made, where necessary,

only at the end of each year. These changes will be outlined in the next succeeding report, to supplement the information to be given in the article outlined in the previous paragraph. Any seismologic papers published elsewhere than in the regular series, *Publications of the Dominion Observatory*, which appear during the year under report, will be listed each year to supplement the list appearing in the appendix to this number.

The work being done will thus be readily followed by anyone interested in making use of the records, and everything in that line done by this division of the Dominion Observatory will be found, in detail or as a reference, within the seismologic volumes of the *Publications*, the first of which is the present volume.

INTRODUCTION TO THE REPORT FOR 1923

The work in seismology at the Dominion Observatory was begun in 1905 by Dr. Otto Klotz. Since that time he was constantly in touch with it. After becoming Director, in 1917, he still maintained an active interest. His death on December 28, 1923, is a loss which will be felt by this division for many years. His contributions to the science and the memory of his efforts to make Canada's part in it of value to the world will, however, continue to live, long after the feeling of loss at his death has begun to be softened by time. This is as he would have wanted it to be and as any man, working as he did for the love of a science, must wish.

This report is the first complete outline of the seismologic activities of this observatory issued since 1912, when Dr. Klotz, in Appendix I to the Report of the Chief Astronomer for 1911, gave a description of the work for the year covered by the report. Since then papers covering parts of the investigations have been printed from time to time but no reports on the work as a whole have been published.

For the purpose of ready reference, the report is divided into sections.

EARTHQUAKES RECORDED

During the year 308 earthquakes were registered, of which a large percentage were visible only on the Milne-Shaw sheets. These are reported in tabular form.

The Milne-Shaw seismographs are mounted on a pier 8 feet square, in a vault 20 feet below the surface of the ground. No building is above this vault. The temperature is constant within a few degrees throughout the year and there is practically no daily variation. The constant temperature and the freedom from local disturbances enable the magnification to be set at 250 fold, resulting in greater sensitivity for these intruments than for the Bosch, which are mounted in the basement of the observatory.

Reports on the records have been published monthly as bulletins. The mailing list in 1922 contained 120 addresses; this number was increased in 1923 to 230. All well-marked earthquakes were reported to the press.

A request was made with the January issue that the stations receiving that bulletin would fill out and return a receipt form, as it was felt that the mailing list should be kept free of stations no longer in operation. As soon as a single receipt was received here, the station reporting was put in a special list and receipt forms were no longer sent out to it in succeeding bulletins. At the end of the year over thirty stations had not yet returned any receipt. The practice will be continued of requesting the return of one, and only one, receipt per year from stations receiving our bulletins.

Beginning with January, 1924, a list has been sent out with each bulletin from this station acknowledging the receipt of reports from other observatories. The bulletins received during December, 1923, were so acknowledged. This method will be continued in the future.

The constants of the seismographs were given each month on the first page of the bulletin. The outline of these for the year, in tabular form, follows the list of earthquakes.

TABULAR LIST OF EARTHQUAKES

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1371								
Jan. 2	e_E	22–58–42	.....	.....	.....	.....	.....	N-S lost in heavy micros.
	eL	23–09·5	22	.....	.....	.....	.....	
	L	23–17	.....	.....	.....	.....	.....	
Jan. 3	F	0–05 ca	.....	.....	.....	.....	.....	
1372								
Jan. 8	i_E	22–12–08	.....	.....	.....	.....	.....	
	eL	22–24·5	.....	.....	.....	.....	.....	
	F	22–50	.....	.....	.....	.....	.....	
1373								
Jan. 11	e_E	4–46	.....	.....	.....	.....	.....	
	eL_E	4–47·5	.....	.....	.....	.....	.....	
	M_E	4–48·8	.....	.....	.....	.....	.....	
	F	4–57	.....	.....	.....	.....	.....	
1374								
Jan. 12	eL_E	19–50	.....	.....	.....	.....	.....	Barely discernible on No. 17.
	L_E	19–55	.....	.....	.....	.....	.....	
	F	20–05	.....	.....	.....	.....	.....	
1375								
Jan. 12	e_E	21–31	.....	.....	.....	.....	.....	Very faintly recorded on No. 17 only.
	eL_E	21–33	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1376								
Jan. 14	eL_E	13–35 to	.....	.....	.....	.....	.....	Can just be detected.
		13–50	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1377								
Jan. 20	i_E	21–57–41	.....	.....	.....	.....	.....	
	eL_E	22–08	.....	.....	.....	.....	.....	
	L_E	22–16	21	.....	.....	.....	.....	
	F	22–35	.....	.....	.....	.....	.....	
1378								
Jan. 21	i_E	4–33–37	.....	.....	.....	.....	.....	On No. 17 only.
	eL_E	4–55	12	.....	.....	.....	.....	
	L_E	4–59 to	.....	.....	.....	.....	.....	
		5–06	.....	.....	.....	.....	.....	
	F	5–26	.....	.....	.....	.....	.....	
1379								
Jan. 21	e	14–07·5	.....	.....	.....	.....	.....	Sinusoidal L waves of small amplitude and with a beautiful gradation in period from 28s to 15s.
	eS?	14–09·7	.....	.....	.....	.....	.....	
	eL	14–32	.....	.....	.....	.....	.....	
	L	14–34	28	.....	.....	.....	.....	
	L	14–57	15	.....	.....	.....	.....	
	F	15–00 ca	.....	.....	.....	.....	.....	
1380								
Jan. 22	$e?_{17}$	1–18	.....	.....	.....	.....	.....	Micros obscure N-S.
	e	1–20·3	.....	.....	.....	.....	.....	
	e	1–22	.....	.....	.....	.....	.....	
	$eS?_E$	1–23–48	.....	.....	.....	.....	.....	
	eL_E	1–39	.....	.....	.....	.....	.....	Sinusoidal L waves of small amplitude predominate.
	L_E	1–54	.....	.....	.....	.....	.....	
	L_E	2–10	19	.....	.....	.....	.....	
	F	3–25	.....	.....	.....	.....	.....	
1381								
Jan. 22	O	9–04–10	.....	.....	.....	.....	3880	Press reports tremor felt at Sacramento, Cal., and Reno, Nev.
	P	9–11–19	.....	.....	.....	.....	.....	
	PR_2	9–12–30	.....	.....	.....	.....	.....	
	S	9–16–59	.....	.....	.....	.....	.....	
	SR_2	9–19–17	.....	.....	.....	.....	.....	
	eL	9–20–44	.....	.....	.....	.....	.....	
	M_{17}	9–26–45	19	500	.....	.....	.....	
	F	12–00 ca	.....	.....	.....	.....	.....	
1382								
Jan. 26	e	21–50–28	.....	.....	.....	.....	.....	Faint traces only.
	i	21–52	.....	.....	.....	.....	.....	
	eL	22–00	.....	.....	.....	.....	.....	
	F	22–30	.....	.....	.....	.....	.....	
1383								
Jan. 27	e	8–09–41	.....	.....	.....	.....	.....	
	eL	8–14	.....	.....	.....	.....	.....	
	M_1	8–16–08	.....	.....	.....	.....	.....	
	M_2	8–17–23	.....	.....	.....	.....	.....	
	F	9–09	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1384								
Feb. 1	e_E	19-45-38	.....	.....	.....	.....	.....	
	e_E	19-55-38	.....	.....	.....	.....	.....	
	eL_E	20-02-39	.....	.....	.....	.....	.....	Sinusoidal L waves.
	L	20-21	34	63	.....	.....	.....	
	L	20-36	18	.....	.....	.....	.....	
	F	21-50	.....	.....	.....	.....	.....	
1385								
Feb. 2	O	1-16-53	.....	.....	.....	.....	6500	
	P	1-26-53	.....	.....	.....	.....	.....	
	S	1-34-56	.....	.....	.....	.....	.....	
	L	1-41-46	.....	.....	.....	.....	.....	
	M	1-49	20	38	.....	.....	.....	
	L	1-56	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros at 3-25 ca.
1386								
Feb. 2	O	5-08-21	.....	.....	.....	.....	7260	
	P	5-19-03	.....	.....	.....	.....	.....	
	S	5-27-45	.....	.....	.....	.....	.....	
	SR_1	5-32-41	.....	.....	.....	.....	.....	
	eL	5-36-00	.....	.....	.....	.....	.....	
	L	5-40	43	.....	.....	.....	.....	
	M_{1E}	5-48	17	140	.....	.....	.....	
	M_{2E}	5-54	17	140	.....	.....	.....	
	L	6-05	15	.....	.....	.....	.....	
	L	6-20	16	.....	.....	.....	.....	
	L	6-40	15	.....	.....	.....	.....	
	L	6-55	15	.....	.....	.....	.....	
	L	7-25	15	.....	.....	.....	.....	
	L	7-51	15	.....	.....	.....	.....	
	L	8-00	15	.....	.....	.....	.....	
	L	8-20	15	.....	.....	.....	.....	
	F	9-10 ca	.....	.....	.....	.....	.....	
1387								
Feb. 3	O	16-01-56	.....	.....	.....	.....	7620	The Saskatoon and Halifax records
	P	16-12-57	.....	.....	.....	.....	.....	indicate, respectively, distances of
	S	16-21-58	.....	.....	.....	.....	.....	5750 km. and 8440 (?) km.
	SR_2	16-29-50	.....	.....	.....	.....	.....	
	eL	16-34-00	.....	.....	.....	.....	.....	
	M_1	16-42	.....	.....	.....	.....	.....	
	M_2	16-45-40	16	4400	.....	.....	.....	
	L	17-00	16	.....	.....	.....	.....	
	L	18-00	16	.....	.....	.....	.....	
	L	19-00	16	.....	.....	.....	.....	
	L	20-00	16	.....	.....	.....	.....	
	L	21-00	14	.....	.....	.....	.....	
	L	23-04	.....	.....	.....	.....	.....	
Feb. 4	L	1-49	.....	.....	.....	.....	.....	
	L	6-42	.....	.....	.....	.....	.....	
	F	7-00	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1388								
Feb. 4	eL	11–47	.....	.....	.....	.....	.....	Small amplitude L waves—an "after quake" to No. 1387.
	eL	12–55	.....	.....	.....	.....	.....	
	eL	13–08	.....	.....	.....	.....	.....	
	F	14–10	.....	.....	.....	.....	.....	
1389								
Feb. 4	eL	16–20	.....	.....	.....	.....	.....	Very faint traces only. Recorded only on M-S.
	F	17–00	.....	.....	.....	.....	.....	
1390								
Feb. 4	eL	17–55	.....	.....	.....	.....	.....	Very faint traces only. Recorded only on M-S.
	F	18–07	.....	.....	.....	.....	.....	
1391								
Feb. 4	eL	18–51	.....	.....	.....	.....	.....	
	L	19–10	.....	.....	.....	.....	.....	
	L	19–15	16	.....	.....	.....	.....	
	F	19–25	.....	.....	.....	.....	.....	
1392								
Feb. 5	e	3–30	.....	.....	.....	.....	.....	
	eL	4–00	.....	.....	.....	.....	.....	
	L	4–04	13	.....	.....	.....	.....	
	F	4–40	.....	.....	.....	.....	.....	
1393								
Feb. 5	eL_E	8–37	.....	.....	.....	.....	.....	
	F	8–55 ca	.....	.....	.....	.....	.....	
1394								
Feb. 5	L_E	12–21	.....	.....	.....	.....	.....	
	F	12–50 ca	.....	.....	.....	.....	.....	
1395								
Feb. 5	eL_E	23–01·5	.....	.....	.....	.....	.....	
	L_E	23–03	15	.....	.....	.....	.....	
	L_E	23–26	.....	.....	.....	.....	.....	
	L_E	23–35	15	.....	.....	.....	.....	
	L_E	23–40	.....	.....	.....	.....	.....	
Feb. 6	F	0–05 ca	.....	.....	.....	.....	.....	
1396								
Feb. 6	eL	13–06	.....	.....	.....	.....	.....	Faint traces only.
	F	13–25 ca	.....	.....	.....	.....	.....	
1397								
Feb. 6	eL	22–28	.....	.....	.....	.....	.....	Faint traces only.
	F	22–45 ca	.....	.....	.....	.....	.....	
1398								
Feb. 8	O	0–33–23	.....	.....	.....	.....	3660	
	P	0–40–15	.....	.....	.....	.....	.....	
	S	0–45–42	.....	.....	.....	.....	.....	
	eL	0–50	.....	.....	.....	.....	.....	
	L	0–52	.....	.....	.....	.....	.....	
	L	1–04	.....	.....	.....	.....	.....	
	F	1–30 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1399								
Feb. 8	eL	3–56	36	.....	.....	.....	.....	
	L	4–00	22	.....	.....	.....	.....	
	L	4–10	15	.....	.....	.....	.....	
	F	4–20	.....	.....	.....	.....	.....	
1400								
Feb. 8	e?	7–53·3	.....	.....	.....	.....	.....	
	e?	8–02	.....	.....	.....	.....	.....	
	eL	8–26	22	.....	.....	.....	.....	
	L	8–29	.....	.....	.....	.....	.....	
	L	8–38	15	.....	.....	.....	.....	
	F	9–10	.....	.....	.....	.....	.....	
1401								
Feb. 8	e	14–24·2	.....	.....	.....	.....	.....	
	eL	14–32	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in changing the records.
1402								
Feb. 9	eL_E	11–33	.....	.....	.....	.....	.....	Traces very small.
	eL_E	12–05	.....	.....	.....	.....	.....	
	F	12–28	.....	.....	.....	.....	.....	
1403								
Feb. 11	eL_E	1–50	.....	.....	.....	.....	.....	
	L_E	1–53	.....	.....	.....	.....	.....	
	L_E	2–00	.....	.....	.....	.....	.....	
	F	2–10	.....	.....	.....	.....	.....	
1404								
Feb. 11	e	17–43	.....	.....	.....	.....	.....	Small amplitudes only.
	eL	17–49	18	.....	.....	.....	.....	
	L	17–50	15	.....	.....	.....	.....	
	F	18–27	.....	.....	.....	.....	.....	
1405								
Feb. 11	O?	22–59–47	.....	.....	.....	.....	(2930)	A curious phenomenon is the appear-
	P?	23–05–37	.....	.....	.....	.....	.....	ance at 0–35·5 of what was at
	S?	23–10–15	.....	.....	.....	.....	.....	first believed to be LR_1. It
	eL	23–13·0	.....	.....	.....	.....	.....	appeared at the minute expected
	L	23–25	16	.....	.....	.....	.....	but one hour too early. The true
	L	23–32	16	.....	.....	.....	.....	interpretation of this increase in
	L	23–43	15	.....	.....	.....	.....	period of the L waves is not
Feb. 12	L	0–05	15	.....	.....	.....	.....	known. It would be interesting
	L	0–35·5	30	.....	.....	.....	.....	to know whether other stations
	F	0–55	.....	.....	.....	.....	.....	found the same period increase on
								their records.
								Δ may be much greater—of the
								order of 10000 km. with the P
								wave missing. Not much success
								has resulted from our attempts to
								so read it.

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1406								
Feb. 12	O	2–09–01	.....	.....	.....	.....	6160	
	P	2–18–41	.....	.....	.....	.....	.....	
	S	2–26–26	.....	.....	.....	.....	.....	
	eL	2–31	.....	.....	.....	.....	.....	
	L	2–35·5	.....	.....	.....	.....	.....	
	M_E	2–43	22	58	.....	.....	.....	
	L	3–00 to	.....	.....	.....	.....	.....	
		3–45	.....	.....	.....	.....	.....	
	F	4–10 ca	.....	.....	.....	.....	.....	
1407								
Feb. 12	eL_E	13–18	.....	.....	.....	.....	.....	
	L_E	13–22	.....	.....	.....	.....	.....	
	F	13–38	.....	.....	.....	.....	.....	
1408								
Feb. 14	eL_E	17–59	.....	.....	.....	.....	.....	Faint traces only.
	L_E	18–08	.....	.....	.....	.....	.....	
	F	18–22 ca	.....	.....	.....	.....	.....	
1409								
Feb. 15	eL	23–14 to	.....	.....	.....	.....	.....	Heavy micros mask much.
		23–31	.....	.....	.....	.....	.....	
1410								
Feb. 16	L	7–15·7	.....	.....	.....	.....	.....	Heavy micros mask much.
	F	7–35	.....	.....	.....	.....	.....	
1411								
Feb. 16	e	9–37·6	.....	.....	.....	.....	.....	Heavy micros mask much.
	eL	9–50·5	.....	.....	.....	.....	.....	
	F	10–12 ca	.....	.....	.....	.....	.....	
1412								
Feb. 18	O	23–50–25	.....	.....	.....	.....	5880	
	P	23–59–49	.....	.....	.....	.....	.....	
Feb. 19	S	0–07–19	.....	.....	.....	.....	.....	
	eL	0–12·5	.....	.....	.....	.....	.....	L waves taper off to very small amplitudes after M has passed.
	L	0–17	.....	.....	.....	.....	.....	
	M_E	0–23–24	19	26	.....	.....	.....	
	F	2–00	.....	.....	.....	.....	.....	
1413								
Feb. 19	e_E	6–39–26	.....	.....	.....	.....	.....	
	e_E	6–51·4	.....	.....	.....	.....	.....	
	e_E	6–56·2	.....	.....	.....	.....	.....	
	eL_E	7–10	.....	.....	.....	.....	.....	
	L_E	7–17	.....	.....	.....	.....	.....	
	L_E	7–36·5	.....	.....	.....	.....	.....	
	F	8–25 ca	.....	.....	.....	.....	.....	
1414								
Feb. 21	eL	1–01	.....	.....	.....	.....	.....	Small amplitudes.
	L	1–09	.....	.....	.....	.....	.....	
	L	1–20	.....	.....	.....	.....	.....	
	L	1–32	.....	.....	.....	.....	.....	
	F	1–50 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES— *Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1415								
Feb. 21	e	3–40	.....	.....	.....	.....	.....	Small amplitudes.
	eL	3–46	.....	.....	.....	.....	.....	
	L	4–00	.....	.....	.....	.....	.....	
	L	4–15	.....	.....	.....	.....	.....	
	L	4–25	.....	.....	.....	.....	.....	
	F	4–45 ca	.....	.....	.....	.....	.....	
1416								
Feb. 23	O	6–05–28	.....	.....	.....	.....	4750	
	P	6–13–39	.....	.....	.....	.....	.....	
	i	6–14–23	.....	.....	.....	.....	.....	
	S	6–20–08	.....	.....	.....	.....	.....	
	eL	6–25·5	.....	.....	.....	.....	.....	Periods of L waves very irregular, amplitudes small.
	L	6–31	.....	.....	.....	.....	.....	
	L	6–43	.....	.....	.....	.....	.....	
	L	6–53	.....	.....	.....	.....	.....	
	L	7–04	.....	.....	.....	.....	.....	
	F	8–17	.....	.....	.....	.....	.....	
1417								
Feb. 24	O	7–34–48	.....	.....	.....	.....	7390	
	P	7–45–37	.....	.....	.....	.....	.....	
	S	7–54–26	.....	.....	.....	.....	.....	
	SR_1	7–59–32	.....	.....	.....	.....	.....	
	SR_2	8–02–08	.....	.....	.....	.....	.....	
	eL	8–05	45	.....	.....	.....	.....	
	L	8–10	.....	.....	.....	.....	.....	
	M_E	8–14·5	16	410	.....	.....	.....	
	L	8–20 to	.....	.....	.....	.....	.....	
		11–00	8	.....	.....	.....	.....	
	F	11–40	.....	.....	.....	.....	.....	
	HALIFAX RECORD							
	O	7–36–40	.....	.....	.....	.....	7620	
	P	7–47–41	.....	.....	.....	.....	.....	
	S	7–56–42	.....	.....	.....	.....	.....	
	eL	8–04	.....	.....	.....	.....	.....	
	M_1	8–15	.....	.....	.....	.....	.....	
	M_2	8–21	.....	.....	.....	.....	.....	
	F	9–20 ca	.....	.....	.....	.....	.....	
	SASKATOON RECORD							
	O	7–36–34	.....	.....	.....	.....	5400	The difference in time for O is probably due to clock errors in Saskatoon and Halifax. The values of Δ for Ottawa and Saskatoon give an intersection at Kamchatka. Strasbourg wireless gives the epicentre as Kamchatka.
	P	7–45–28	.....	.....	.....	.....	.....	
	S	7–52–32	.....	.....	.....	.....	.....	
	eL	8–00	.....	.....	.....	.....	.....	
	L	8–02	.....	.....	.....	.....	.....	
	M_1	8–05·5	.....	.....	.....	.....	.....	
	M_2	8–11·5	.....	.....	.....	.....	.....	
	F	9–00 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1418								
Feb. 24	eL	18–58	.....	.....	.....	.....	.....	
	F	19–05	.....	.....	.....	.....	.....	
1419								
Feb. 25	eL	4–37	.....	.....	.....	.....	.....	Very small amplitudes only.
	L	4–39	.....	.....	.....	.....	.....	
	F	5–00	.....	.....	.....	.....	.....	
1420								
Feb. 27	O	20–39–12	.....	.....	.....	.....	2850	
	P	20–44–54	.....	.....	.....	.....	.....	
	S	20–49–26	.....	.....	.....	.....	.....	
	eL	20–51–38	.....	.....	.....	.....	.....	
	L	20–53–45	.....	.....	.....	.....	.....	
	F	21–30 ca	.....	.....	.....	.....	.....	
1421								
Feb. 28	O	(22–20–33)	.....	.....	.....	.....	(2640)	Small amplitudes only.
	P?	22–25–55	.....	.....	.....	.....	.....	
	S	22–30–11	.....	.....	.....	.....	.....	
	eL	22–34	.....	.....	.....	.....	.....	
	M	22–38	.....	.....	.....	.....	.....	
	F	23–18	.....	.....	.....	.....	.....	
1422								
Mar. 1	O	(8–26–15)	.....	.....	.....	.....	(6240)	Small amplitudes only.
	P	(8–36–00)	.....	.....	.....	.....	.....	
	S	8–43–49	.....	.....	.....	.....	.....	
	i	8–45–47	.....	.....	.....	.....	.....	
	i	8–47–38	.....	.....	.....	.....	.....	
	eL	8–53	.....	.....	.....	.....	.....	
	L	8–56	.....	.....	.....	.....	.....	
	L	9–00 to	.....	.....	.....	.....	.....	
		10–00	.....	.....	.....	.....	.....	
	F	11–00 ca	.....	.....	.....	.....	.....	
1423								
Mar. 2	e?	17–01–44	.....	.....	.....	.....	.....	Halifax record contains traces of L
	eS?	17–09–32	.....	.....	.....	.....	.....	waves but no P or S.
	i	17–19–49	.....	.....	.....	.....	.....	
	i	17–26–45	.....	.....	.....	.....	.....	
	L	17–43	.....	.....	.....	.....	.....	
	M	17–57	23	.....	.....	.....	.....	
	L	18–09	21	.....	.....	.....	.....	
	L	18–36	19	.....	.....	.....	.....	
	F	20–05	.....	.....	.....	.....	.....	
1424								
Mar. 3	i	22–33–18	.....	.....	.....	.....	.....	Very small amplitudes.
	e	22–42–00	.....	.....	.....	.....	.....	
	eL	22–57	.....	.....	.....	.....	.....	
	L	23–05 to	.....	.....	.....	.....	.....	
		23–25	.....	.....	.....	.....	.....	
	F	23–53	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1425								
Mar. 4	eL	0–29	.....	.....	.....	.....	.....	Traces only.
	L	0–36	.....	.....	.....	.....	.....	
	F	1–15 ca	.....	.....	.....	.....	.....	
1426								
Mar. 4	eL	7–44	.....	.....	.....	.....	.....	Very small amplitudes.
	L	7–47 to	.....	.....	.....	.....	.....	
		8–26	.....	.....	.....	.....	.....	
	F	9–30	.....	.....	.....	.....	.....	
1427								
Mar. 10	eL	0–02	.....	.....	.....	.....	.....	
	L	0–08	.....	.....	.....	.....	.....	
	F	0–38	.....	.....	.....	.....	.....	
1428								
Mar. 10	e	8–33	.....	.....	.....	.....	.....	
	e(L or S)	8–38	.....	.....	.....	.....	.....	
	L	8–55	.....	.....	.....	.....	.....	
	L	9–00·5	.....	.....	.....	.....	.....	
	F	9–40 ca	.....	.....	.....	.....	.....	
1429								
Mar. 11	O	23–06–45	.....	.....	.....	.....	3960	Small amplitudes only.
	P	23–14–00	.....	.....	.....	.....	.....	
	S	23–19–45	.....	.....	.....	.....	.....	
	eL	23–25	.....	.....	.....	.....	.....	
	M	23–29	.....	.....	.....	.....	.....	
	F	0–15 ca	.....	.....	.....	.....	.....	
1430								
Mar. 12	eL	10–25	.....	.....	.....	.....	.....	
	L	10–34	.....	.....	.....	.....	.....	
	F	10–50	.....	.....	.....	.....	.....	
1431								
Mar. 13	i	20–08–38	.....	.....	.....	.....	.....	
	eL	20–19·5	.....	.....	.....	.....	.....	
	L	20–24·5 to						
		20–45	.....	.....	.....	.....	.....	
	F	21–15 ca	.....	.....	.....	.....	.....	
1432								
Mar. 14	O	(20–54–49)	.....	.....	.....	.....	(6580)	Very small amplitudes throughout.
	P	(21–04–53)	.....	.....	.....	.....	.....	
	S	(21–13–00)	.....	.....	.....	.....	.....	
	eL	21–21·5	.....	.....	.....	.....	.....	
	L	21–43	.....	.....	.....	.....	.....	
	M_1	21–49	22	.....	.....	.....	.....	
	M_2	21–54·5	21	.....	.....	.....	.....	
	L	22–02	19	.....	.....	.....	.....	
	L	22–08	18	.....	.....	.....	.....	
	L	22–12·5	16	.....	.....	.....	.....	
	F	23–15 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1433		h m s	s	μ	μ	μ	km.	
Mar. 15	O	5–40–16	.....	.....	.....	.....	7020	
	P	5–50–45	.....	.....	.....	.....	.....	
	S	5–59–15	.....	.....	.....	.....	.....	
	eL	6–05·5	.....	.....	.....	.....	.....	
	M	6–18	.....	.....	.....	.....	.....	
	F	7–35 ca	.....	.....	.....	.....	.....	
1434								
Mar. 16	O	22–12–33	.....	.....	.....	.....	6320	Strasbourg wireless gives
	P	22–22–22	.....	.....	.....	.....	.....	O=22–15–45
	S	22–30–15	.....	.....	.....	.....	.....	Δ=12500 km.
	eL	22–39–15	.....	.....	.....	.....	.....	
	L	22–58	32	.....	.....	.....	.....	
	M	23–12	22	.....	.....	.....	.....	
	L	23–16	19	.....	.....	.....	.....	
	L	23–23	17	.....	.....	.....	.....	
	L	23–30 to	.....	.....	.....	.....	.....	
Mar. 17		0–00	15	.....	.....	.....	.....	
	L	0–05	14	.....	.....	.....	.....	
	F	1–05 ca	.....	.....	.....	.....	.....	
1435								
Mar. 18	eL	20–45–15	.....	.....	.....	.....	.....	
	L	20–45·8	.....	.....	.....	.....	.....	
	M	20–48	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Micros interfere.
1436								
Mar. 19	e	11–23	.....	.....	.....	.....	.....	
	S?	11–26–32	.....	.....	.....	.....	.....	
	L	11–29	.....	.....	.....	.....	.....	
	M	11–35	.....	.....	.....	.....	.....	
	F	12–27 ca	.....	.....	.....	.....	.....	
1437								
Mar. 19	eL	16–57	.....	.....	.....	.....	.....	
	L	17–15	.....	.....	.....	.....	.....	
	L	17–20	.....	.....	.....	.....	.....	
	L	17–28	.....	.....	.....	.....	.....	
	F	17–45 ca	.....	.....	.....	.....	.....	
1438								
Mar. 19	eL	21–56	.....	.....	.....	.....	.....	Small amplitudes.
	L	22–03·5	.....	.....	.....	.....	.....	
	L	22–05	.....	.....	.....	.....	.....	
	F	22–30 ca	.....	.....	.....	.....	.....	
1439								
Mar. 24	e	2–37	.....	.....	.....	.....	.....	Small amplitudes.
	L	2–41	.....	.....	.....	.....	.....	
	F	3–00 ca	.....	.....	.....	.....	.....	
1440								
Mar. 24	e	8–51·4	.....	.....	.....	.....	.....	
	L	8–55·4	.....	.....	.....	.....	.....	
	L	8–57	.....	.....	.....	.....	.....	
	F	9–10 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1441								
Mar. 24	e_E	13-00·6	.....	.....	.....	.....	.....	Earthquake does not appear to have been a single abrupt shock. The phases seem to result from several shocks and do not admit of resolution.
	e	13-04-53	.....	.....	.....	.....	.....	
	S	13-06	.....	.....	.....	.....	.....	
	eL	13-18	.....	.....	.....	.....	.....	
	L	13-25	.....	.....	.....	.....	.....	
	M_1	13-38·5	30	.....	.....	.....	.....	
	M_2	13-42·5	26	.....	.....	.....	.....	
	L	13-43 to	.....	.....	.....	.....	.....	
		14-00	18	.....	.....	.....	.....	
	L	14-10 to	.....	.....	.....	.....	.....	
		15-45	13	.....	.....	.....	.....	
	F	15-30 ca	.....	.....	.....	.....	.....	
1442								
Mar. 26	eL_E	14-57	.....	.....	.....	.....	.....	Small sinusoidal L waves
	L_E	15-00	40	.....	.....	.....	.....	
	L_E	15-02·5	24	.....	.....	.....	.....	
	L_E	15-10·5	21	.....	.....	.....	.....	
	L_E	15-14	18	.....	.....	.....	.....	
	L_E	15-24·5	22	.....	.....	.....	.....	
	L_E	15-32	20	.....	.....	.....	.....	
	F	15-49 ca	.....	.....	.....	.....	.....	
1443								
Mar. 28	e	(5-10)	.....	.....	.....	.....	.....	Times uncertain. Time signals faint owing to the intensity of the light spot.
	e	(5-15)	.....	.....	.....	.....	.....	
	eL?	(5-21)	.....	.....	.....	.....	.....	
	L	(5-26 to	.....	.....	.....	.....	.....	
		6-20)	.....	.....	.....	.....	.....	
	F	(6-30)	.....	.....	.....	.....	.....	
1444								
April 5	eL	(23-00)	.....	.....	.....	.....	.....	Times uncertain owing to halation trouble on record.
	L	(23-06)	.....	.....	.....	.....	.....	
	F	(23-20) ca	.....	.....	.....	.....	.....	
1445								
April 13	e	10-26-26	.....	.....	.....	.....	.....	Small amplitudes and irregular periods.
	e	10-27-58	.....	.....	.....	.....	.....	
	e	10-33-16	.....	.....	.....	.....	.....	
	i or eL	10-36-08	.....	.....	.....	.....	.....	
	L	11-20	.....	.....	.....	.....	.....	
	eL	12-00	.....	.....	.....	.....	.....	
	F	12-25	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1446								
April 13	O	15–31–12	.....	.....	.....	.....	7380	
	P_M	15–42–00	.....	.....	.....	.....	.....	On M–S only.
	S	15–50–48	.....	.....	.....	.....	.....	
	SR_2	15–58–20	.....	.....	.....	.....	.....	
	eL?	16–02	.....	.....	.....	.....	.....	
	M_{1-17}	16–09	17	110	.....	.....	.....	
	M_{2-17}	16–13	22	275	.....	.....	.....	
	M_{3-17}	16–15	19	195	.....	.....	.....	
	M_{4-17}	16–17	17	140	.....	.....	.....	
	L	16–20 to	17	.....	.....	.....	.....	
		18–00	10	.....	.....	.....	.....	
	F	18–40	.....	.....	.....	.....	.....	
1447								
April 13	eL	21–16·5 to	.....	.....	.....	.....	.....	
		21–26	.....	.....	.....	.....	.....	
	F	21–37	.....	.....	.....	.....	.....	
1448								
April 14	eL_{17}	9–31·5 to	.....	.....	.....	.....	.....	
		9–44	.....	.....	.....	.....	.....	
	F	9–50 ca	.....	.....	.....	.....	.....	
1449								
April 14	eL	15–57	.....	.....	.....	.....	.....	
	L	16–00 to	.....	.....	.....	.....	.....	
		16–08	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1450								
April 19	e	3–31–41	.....	.....	.....	.....	.....	
	eL?	3–51	.....	.....	.....	.....	.....	
	L	4–05	45	.....	.....	.....	.....	
	L	4–12	32	.....	.....	.....	.....	
	L	4–25	22	.....	.....	.....	.....	
	L	4–39·5	.....	.....	.....	.....	.....	
	L	4–50	.....	.....	.....	.....	.....	
	L	5–03	.....	.....	.....	.....	.....	
	F	5–45	.....	.....	.....	.....	.....	
1451								
April 23	O	3–33–48	.....	.....	.....	.....	5580	Very faintly recorded as to P and S.
	P	3–42–53	.....	.....	.....	.....	.....	
	S	3–50–07	.....	.....	.....	.....	.....	
	eL	3–58·5	.....	.....	.....	.....	.....	
	L	4–04	45	.....	.....	.....	.....	
	L	4–10	30	.....	.....	.....	.....	
	M	4–16	17	26	.....	.....	.....	
	L	4–24	14	.....	.....	.....	.....	
	L	4–31	11	.....	.....	.....	.....	
	F	5–25	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1452		h m s	s	μ	μ	μ	km.	
April 24	eS?	22–58–15	.....	.....	.....	.....	.....	Δ probably the same as for No. 1453.
	eL	23–04	.....	.....	.....	.....	.....	Very irregular periods.
	M	23–05·5	.....	.....	.....	.....	.....	
	F	23–37	.....	.....	.....	.....	.....	
1453								
April 25	O	19–31–46	.....	.....	.....	.....	4300	Irregular periods. Bears a striking
	P	19–39–26	.....	.....	.....	.....	.....	resemblance to No. 1452.
	S	19–45–30	.....	.....	.....	.....	.....	
	eL	19–50·5	.....	.....	.....	.....	.....	
	M	19–52·5	.....	.....	.....	.....	.....	
	L	19–55	.....	.....	.....	.....	.....	
	L	20–07·5	.....	.....	.....	.....	.....	
	F	20–50	.....	.....	.....	.....	.....	
1454								
April 27	e	10–49	.....	.....	.....	.....	.....	
	eL	11–05·5	.....	.....	.....	.....	.....	
	L	11–33	25	.....	.....	.....	.....	
	F	12–06	.....	.....	.....	.....	.....	
1455								
April 29	O	2–31–08	.....	.....	.....	.....	3900	Small amplitudes.
	P	2–38–19	.....	.....	.....	.....	.....	
	S	2–44–00	.....	.....	.....	.....	.....	
	eL?	2–49·5	.....	.....	.....	.....	.....	
	L	2–51·7	.....	.....	.....	.....	.....	
	M	2–54·4	12	12	.....	.....	.....	
	F	3–35 ca	.....	.....	.....	.....	.....	
1456								
April 29	e?	9–46·4	.....	.....	.....	.....	.....	Sinusoidal L waves of small ampli-
	eL	9–56·5	.....	.....	.....	.....	.....	tude.
	L	10–10	30	.....	.....	.....	.....	
	L	10–19	21	.....	.....	.....	.....	
	L	10–24	18	.....	.....	.....	.....	
	L	10–27	16	.....	.....	.....	.....	
	F	10–44 ca	.....	.....	.....	.....	.....	
1457								
April 29	eL	19–33	.....	.....	.....	.....	.....	Traces on M-S only.
	L	19–35	23	.....	.....	.....	.....	
	F	19–43	.....	.....	.....	.....	.....	
1458								
April 30	e?	16–37·5	.....	.....	.....	.....	.....	
	eL	16–43	.....	.....	.....	.....	.....	
	F	17–05	.....	.....	.....	.....	.....	
1459								
April 30	eL	20–55	.....	.....	.....	.....	.....	
	L	20–58	23	.....	.....	.....	.....	
	L	21–11·5	.....	.....	.....	.....	.....	
	F	21–20	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1460								
May 1	e	10–55	.....	.....	.....	.....	.....	
	e	11–01	.....	.....	.....	.....	.....	
	eS?	11–10–38	.....	.....	.....	.....	.....	
	eL	11–17·5	.....	.....	.....	.....	.....	
	L	11–34–44	.....	.....	.....	.....	.....	
	F	12–05	.....	.....	.....	.....	.....	
1461								
May 2	e	16–34–52	.....	.....	.....	.....	.....	Irregular small periods.
	e	16–36–15	.....	.....	.....	.....	.....	
	eL	16–41·5	.....	.....	.....	.....	.....	
	L	16–42 to	.....	.....	.....	.....	.....	
		17–05	.....	.....	.....	.....	.....	
	F	17–30 ca	.....	.....	.....	.....	.....	
1462								
May 4	O	16–26–34	.....	.....	.....	.....	5520	Harvard gives O = 16–26–31 Δ = 6040 km. Strasbourg gives O = 16–26–35 Δ = 8500 km. These values for Δ give circles which intersect at φ = 54° N. λ = 155° W., near Kodiak, Alaska.
	P	16–35–35	.....	.....	.....	.....	.....	
	†PR_{1M}	16–37–34	.....	.....	.....	.....	.....	
	PR_{2M}	(16–38–07)	.....	.....	.....	.....	.....	
	S	16–42–45	.....	.....	.....	.....	.....	
	i	16–45–08	.....	.....	.....	.....	.....	
	SR_1	16–46–37	.....	.....	.....	.....	.....	
	SR_2	(16–47–30)	.....	.....	.....	.....	.....	
	eL	16–49	49	360	.....	.....	.....	
	M_{1M}	16–53–08	25	412	.....	.....	.....	
	M_{2M}	16–56·5	15	307	.....	.....	.....	
	M_{3M}	17–04·7	13	84	.....	.....	.....	
	M_{4M}	17–07	13	120	.....	.....	.....	
	M_{5M}	17–10·5	13	90	.....	.....	.....	
	M_{6M}	17–13·3	13	90	.....	.....	.....	
	M_{7M}	17–22·3	13	85	.....	.....	.....	
	L	17–25 to	.....	.....	.....	.....	.....	
		20–05	.....	.....	.....	.....	.....	
	F	20–30 ca	.....	.....	.....	.....	.....	
1463								
May 4	O	(22–26–50)	.....	.....	.....	.....	(8100)	
	P?	22–28–20	.....	.....	.....	.....	.....	
	S?	22–47–41	.....	.....	.....	.....	.....	
	SR_2?	22–56	.....	.....	.....	.....	.....	
	eL	23–01	.....	.....	.....	.....	.....	
	L	23–10	.....	.....	.....	.....	.....	
	L	0–40	.....	.....	.....	.....	.....	
	F	1–15	.....	.....	.....	.....	.....	
1464								
May 5	eL	9–57·5	.....	.....	.....	.....	.....	
	F	10–04	.....	.....	.....	.....	.....	

†M subscript indicates registration on Milne-Shaw seismographs only.

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1465		h m s	s	μ	μ	μ	km.	
May 5	e	15–17–12	.....	.....	.....	.....	.....	
	eL	15–23	.....	.....	.....	.....	.....	
	L	15–27	.....	.....	.....	.....	.....	
	F	16–00	.....	.....	.....	.....	.....	
1466								
May 8	e	19–23–00	.....	.....	.....	.....	.....	Very faint traces only.
	eS?	19–27–22	.....	.....	.....	.....	.....	
	eL?	19–32	.....	.....	.....	.....	.....	
	L	19–34	.....	.....	.....	.....	.....	
	L	19–46 to	.....	.....	.....	.....	.....	
		20–07	.....	.....	.....	.....	.....	
	F	20–18	.....	.....	.....	.....	.....	
1467								
May 10	e	4–01–32	.....	.....	.....	.....	.....	Very small amplitudes.
	e	4–10–00	.....	.....	.....	.....	.....	
	e	4–11–41	.....	.....	.....	.....	.....	
	e	4–13–32	.....	.....	.....	.....	.....	
	e	4–19–26	.....	.....	.....	.....	.....	
	eL	4–47 to	.....	.....	.....	.....	.....	
		5–04	19	.....	.....	.....	.....	
	F	6–20 ca	.....	.....	.....	.....	.....	
1468								
May 11	e?	(8–42–52)	.....	.....	.....	.....	.....	
	e	8–44–00	.....	.....	.....	.....	.....	
	e	8–49–37	.....	.....	.....	.....	.....	
	e	8–54	.....	.....	.....	.....	.....	
	L	9–20 to	35	.....	.....	.....	.....	
		9–38	19	.....	.....	.....	.....	
	F	10 ca	.....	.....	.....	.....	.....	
1469								
May 12	e	1–41–30	.....	.....	.....	.....	.....	
	e	1–43–16	.....	.....	.....	.....	.....	
	e	1–55	.....	.....	.....	.....	.....	
	e	2–08	.....	.....	.....	.....	.....	
	eL	2–22	.....	.....	.....	.....	.....	
	L	2–29	44	.....	.....	.....	.....	
	L	2–40 to	.....	.....	.....	.....	.....	
		2–59	22	.....	.....	.....	.....	
	L	3–02 to	.....	.....	.....	.....	.....	
		3–27	21	.....	.....	.....	.....	
	F	4–00 ca	.....	.....	.....	.....	.....	
1470								
May 15	O	21–43–00	.....	.....	.....	.....	(7600)	
	P?	21–54–00	.....	.....	.....	.....	.....	
	S?	22–03–00	.....	.....	.....	.....	.....	
	eL?	22–09·5	.....	.....	.....	.....	.....	
	L	22–20	.....	.....	.....	.....	.....	
	L	22–23 to	.....	.....	.....	.....	.....	
		22–50	16	.....	.....	.....	.....	
	L	22–51 to	.....	.....	.....	.....	.....	
		23–05	16	.....	.....	.....	.....	
	F	23–35	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1471								
May 16	e	(18–27–28)	.....	.....	.....	.....	.....	
	e	18–34–00	.....	.....	.....	.....	.....	
	e	18–39·6	.....	.....	.....	.....	.....	
	eL	19–04·5	.....	.....	.....	.....	.....	Small sinusoidal L waves.
	L	19–11	19	.....	.....	.....	.....	
	L	19–19 to	.....	.....	.....	.....	.....	
		19–43	16	.....	.....	.....	.....	
	F	20–00	.....	.....	.....	.....	.....	
1472								
May 23	O	22–37–21	.....	.....	.....	.....	7580	
	P	24–48–20	.....	.....	.....	.....	.....	
	S	22–57–19	.....	.....	.....	.....	.....	
	eL	23–05–22	.....	.....	.....	.....	.....	
	M_1	23–14	.....	.....	.....	.....	.....	
	M_2	23–20·5	18	.....	.....	.....	.....	
	M_3	23–23·2	18	.....	.....	.....	.....	
	L	23–26 to	.....	.....	.....	.....	.....	
May 24		0–06	15	.....	.....	.....	.....	
	L	0–06 to	.....	.....	.....	.....	.....	
		2–06	.....	.....	.....	.....	.....	
	F	2–45 ca	.....	.....	.....	.....	.....	
1473								
May 25	e	22–45–45	.....	.....	.....	.....	.....	On M-S No. 17 only.
	e?	22–52–15	.....	.....	.....	.....	.....	
	eL	22–58	.....	.....	.....	.....	.....	
	L	23–05	34	.....	.....	.....	.....	
	L	23–15	17	.....	.....	.....	.....	
May 26	F	0–00 ca	.....	.....	.....	.....	.....	
1474								
May 26	O	3–29–41	.....	.....	.....	.....	4480	
	P	3–37–34	.....	.....	.....	.....	.....	
	S	3–43–48	.....	.....	.....	.....	.....	
	eL	3–49·5	.....	.....	.....	.....	.....	
	L	4–00	.....	.....	.....	.....	.....	
	L	4–07	21	.....	.....	.....	.....	
	F	4–55	.....	.....	.....	.....	.....	
1475								
May 26	e	9–13·5	.....	.....	.....	.....	.....	
	e	9–19	.....	.....	.....	.....	.....	
	eL	9–35	.....	.....	.....	.....	.....	
	L	9–41	30	.....	.....	.....	.....	
	L	9–54	20	.....	.....	.....	.....	
	F	10–45 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1476								
May 28	eP_{17}?	1–48–45	.....	.....	.....	.....	.....	
	eL	2–05–40	.....	.....	.....	.....	.....	
	L	2–37	30	.....	.....	.....	.....	
	L	2–42	25	.....	.....	.....	.....	
	L	2–50 to	.....	.....	.....	.....	.....	
		3–48	15	.....	.....	.....	.....	
	F	4–00 ca	.....	.....	.....	.....	.....	
1477								
May 30	eP_{17}?	8–48–23	.....	.....	.....	.....	.....	
	eL	8–57	.....	.....	.....	.....	.....	
	L	9–01	.....	.....	.....	.....	.....	
	L	9–16	.....	.....	.....	.....	.....	
	F	10–00	.....	.....	.....	.....	.....	
1478								
May 30	eL_{17}	16–02	.....	.....	.....	.....	.....	
	L	16–11 to	.....	.....	.....	.....	.....	
		16–18	.....	.....	.....	.....	.....	
	F	16–25	.....	.....	.....	.....	.....	
1479								
May 30	i	18–14–30	.....	.....	.....	.....	.....	
	L	18–25	.....	.....	.....	.....	.....	
	L	18–27	15	.....	.....	.....	.....	
	L	18–36 to	.....	.....	.....	.....	.....	
		19–01	15	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in changing sheets.
1480								
May 31	e	6–19–52	.....	.....	.....	.....	.....	
	e	6–26	.....	.....	.....	.....	.....	
	eL	6–35	.....	.....	.....	.....	.....	
	L	6–46 to	.....	.....	.....	.....	.....	
		6–54	23	.....	.....	.....	.....	
	L	6–54 to	.....	.....	.....	.....	.....	
		7–16	16	.....	.....	.....	.....	
	F	7–35	.....	.....	.....	.....	.....	
1481								
May 31	O	22–05–48	.....	.....	.....	.....	3380	
	P	22–12–19	.....	.....	.....	.....	.....	
	S	22–17–28	.....	.....	.....	.....	.....	
	eL	22–20	.....	.....	.....	.....	.....	
	L	22–21·5 to	.....	.....	.....	.....	.....	
		22–25	21	.....	.....	.....	.....	
	L	22–29 to	.....	.....	.....	.....	.....	
		22–54	16	.....	.....	.....	.....	
	F	23–25	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1482		h m s	s	μ	μ	μ	km.	
June 1	O	17-25-31	.....	.....	.....	.....	9320	
	P	17-38-00	.....	.....	.....	.....	.....	
	PR_1	17-41-46	.....	.....	.....	.....	.....	
	S	17-48-26	.....	.....	.....	.....	.....	
	i	17-48-49	.....	.....	.....	.....	.....	
	i	17-50-00	.....	.....	.....	.....	.....	
	SR_1	17-54·5	.....	.....	.....	.....	.....	
	L	18-09	.....	.....	.....	.....	.....	
	L	18-14·5	23	.....	.....	.....	.....	
	M	18-19·5	.....	.....	.....	.....	.....	
	M	18-24·5	.....	.....	.....	.....	.....	
	M	18-28·5	.....	.....	.....	.....	.....	
	L	18-30 to	.....	.....	.....	.....	.....	
		20-00	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in next quake.
1483								
June 1	P	.....	.....	.....	.....	.....	.....	Lost in preceding quake.
	S	20-39-23	.....	.....	.....	.....	.....	
	L	20-46	.....	.....	.....	.....	.....	
	L	20-55	.....	.....	.....	.....	.....	
	L	21-02	23	.....	.....	.....	.....	
	M	21-13·5	.....	.....	.....	.....	.....	
	L	21-20 to	.....	.....	.....	.....	.....	
		22-40	.....	.....	.....	.....	.....	
	F	23-26	.....	.....	.....	.....	.....	
1484								
June 2	e	1-20·5	.....	.....	.....	.....	.....	
	e	1-28	.....	.....	.....	.....	.....	
	eL	1-36	.....	.....	.....	.....	.....	
	L	2-04	.....	.....	.....	.....	.....	
	F	3-30 ca	.....	.....	.....	.....	.....	
1485								
June 2	eL	5-53·5	.....	.....	.....	.....	.....	
	F	6-03	.....	.....	.....	.....	.....	
1486								
June 2	eL_M	13-39	.....	.....	.....	.....	.....	On M-S only.
	L_M	13-43·5	.....	.....	.....	.....	.....	
	F	14-26 ca	.....	.....	.....	.....	.....	
1487								
June 2	e?	14-43·7	.....	.....	.....	.....	.....	
	e	14-54	.....	.....	.....	.....	.....	
	L	15-14·5	.....	.....	.....	.....	.....	
	F	16-00 ca	.....	.....	.....	.....	.....	
1488								
June 2	eL	23-58	.....	.....	.....	.....	.....	
June 3	F	0-10 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1489								
June 3	eL	12–23	.....	.....	.....	.....	.....	
	L	12–30·5	.....	.....	.....	.....	.....	
	L	12–35 to	.....	.....	.....	.....	.....	
		12–50	.....	.....	.....	.....	.....	
	F	13–00 ca	.....	.....	.....	.....	.....	
1490								
June 4	e?	(21–20)	.....	.....	.....	.....	.....	Small traces only.
	eL	(21–40)	.....	.....	.....	.....	.....	
	L	21–51 to	.....	.....	.....	.....	.....	
		21–56	.....	.....	.....	.....	.....	
	F	22–50 ca	.....	.....	.....	.....	.....	
1491								
June 5	e	(6–26·0)	.....	.....	.....	.....	.....	
	e	6–31·5	.....	.....	.....	.....	.....	
	eL?	6–35	.....	.....	.....	.....	.....	
	L	6–39 to	.....	.....	.....	.....	.....	
		6–55	.....	.....	.....	.....	.....	
	F	7–00 ca	.....	.....	.....	.....	.....	
1492								
June 6	e	18–00–34	.....	.....	.....	.....	.....	May be two quakes. Distant.
	e	18–07	.....	.....	.....	.....	.....	Phases not marked. Strasbourg
	eL	18–16	.....	.....	.....	.....	.....	gives Δ=8880 km. and
	L	18–29 to	.....	.....	.....	.....	.....	O=17-42-01.
		19–12	.....	.....	.....	.....	.....	
	L	19–40	.....	.....	.....	.....	.....	
	L	20–07	.....	.....	.....	.....	.....	
	L	20–29	.....	.....	.....	.....	.....	
	F	20–55 ca	.....	.....	.....	.....	.....	
1493								
June 6	e	23–10–23	.....	.....	.....	.....	.....	Nearer than 1492 on same sheet.
	eL	23–14	.....	.....	.....	.....	.....	
	M	23–15·5	.....	.....	.....	.....	.....	
June 7	F	0–00 ca	.....	.....	.....	.....	.....	
1494								
June 8	eL	8–16	.....	.....	.....	.....	.....	Faint traces only.
	L	8–18 to	.....	.....	.....	.....	.....	
		8–27	.....	.....	.....	.....	.....	
	F	8–50 ca	.....	.....	.....	.....	.....	
1495								
June 10	eL	1–46	.....	.....	.....	.....	.....	Barely discernible.
	F	2–00 ca	.....	.....	.....	.....	.....	
1496								
June 10	e	19–03·5	.....	.....	.....	.....	.....	
	eL	19–10·5	.....	.....	.....	.....	.....	
	L?	19–36	.....	.....	.....	.....	.....	
	F	19–49	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1497								
June 10	e?	20–38	.....	.....	.....	.....	.....	Small traces only.
	e?	20–51·3	.....	.....	.....	.....	.....	
	eL	20–57	.....	.....	.....	.....	.....	
	L	21–00 to	.....	.....	.....	.....	.....	
		21–23	.....	.....	.....	.....	.....	
	F	21–40	.....	.....	.....	.....	.....	
1498								
June 11	e	11–30·4	.....	.....	.....	.....	.....	
	eL	11–37 to	.....	.....	.....	.....	.....	
		11–47	.....	.....	.....	.....	.....	
	F	12–00 ca	.....	.....	.....	.....	.....	
1499								
June 12	eL	6–42	.....	.....	.....	.....	.....	
	L	6–46 to	.....	.....	.....	.....	.....	
		6–53	.....	.....	.....	.....	.....	
	F	7–10	.....	.....	.....	.....	.....	
1500								
June 14	e	6–16–20	.....	.....	.....	.....	.....	
	eL	6–19–45	.....	.....	.....	.....	.....	
	F	6–49	.....	.....	.....	.....	.....	
1501								
June 18	O	8–26–16	.....	.....	.....	.....	4680	Strasbourg gives P=8–31–40 and Δ=7700 km.
	e?	8–31–00	.....	.....	.....	.....	.....	
	P	8–34–23	.....	.....	.....	.....	.....	
	S	8–40–48	.....	.....	.....	.....	.....	
	i	8–41–41	.....	.....	.....	.....	.....	
	SR_2	8–44–15	.....	.....	.....	.....	.....	
	eL	8–50	.....	.....	.....	.....	.....	Readings difficult to interpret accurately.
	L	9–06	.....	.....	.....	.....	.....	
	L	9–12 to	.....	.....	.....	.....	.....	
		9–33	20	.....	.....	.....	.....	
	L	9–34·5 to	.....	.....	.....	.....	.....	
		10–50	13	.....	.....	.....	.....	
	F	11–35	.....	.....	.....	.....	.....	
1502								
June 18	e?	17–16	.....	.....	.....	.....	.....	
	e?	17–20·8	.....	.....	.....	.....	.....	
	eL	17–28·6	.....	.....	.....	.....	.....	
	F	17–38	.....	.....	.....	.....	.....	
1503								
June 18	e	18–19·5	.....	.....	.....	.....	.....	
	eL?	18–24	.....	.....	.....	.....	.....	
	L	18–46 to	.....	.....	.....	.....	.....	
		18–51	.....	.....	.....	.....	.....	
	F	19–12 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1504								
June 19	O	22–43–32	.....	.....	.....	.....	4900	
	P	22–51–53	.....	.....	.....	.....	.....	
	PR_1	22–53–38	.....	.....	.....	.....	.....	
	S	22–58–30	.....	.....	.....	.....	.....	
	i	23–01–02	.....	.....	.....	.....	.....	
	SR_1	23–02–12	.....	.....	.....	.....	.....	
	eL	23–06	.....	.....	.....	.....	.....	
	M_1	23–07·5	.....	.....	.....	.....	.....	
	M_2	23–10·5	.....	.....	.....	.....	.....	
	L	23–14 to	.....	.....	.....	.....	.....	
June 20		0–10	.....	.....	.....	.....	.....	
	F	1–10 ca	.....	.....	.....	.....	.....	
	HALIFAX RECORD							
June 19	O	22–41–42	.....	.....	.....	.....	6450	
	P	22–51–39	.....	.....	.....	.....	.....	
	S	22–59–39	.....	.....	.....	.....	.....	
	L	23–10–40	.....	.....	.....	.....	.....	
	M	23–14·5	.....	.....	.....	.....	.....	
	F	Lost	.....	.....	.....	.....	.....	
1505								
June 20	eL	6–28	.....	.....	.....	.....	.....	
	F	6–44	.....	.....	.....	.....	.....	
1506								
June 22	e	4–02	.....	.....	.....	.....	.....	
	eL	4–05·4	.....	.....	.....	.....	.....	
	L	4–08	.....	.....	.....	.....	.....	
	F	4–38	.....	.....	.....	.....	.....	
1507								
June 22	O	(6–54–19)	.....	.....	.....	.....	(6100)	
	P	(7–03–56)	.....	.....	.....	.....	.....	
	S	7–11–37	.....	.....	.....	.....	.....	
	SR_2?	7–17–06	.....	.....	.....	.....	.....	
	eL	7–19–30	.....	.....	.....	.....	.....	
	L	7–31	.....	.....	.....	.....	.....	
	M	7–41·5	.....	.....	.....	.....	.....	
	M	7–44·5	.....	.....	.....	.....	.....	
	M	7–50	.....	.....	.....	.....	.....	
	M	7–53·5	.....	.....	.....	.....	.....	
	M	7–55·5	.....	.....	.....	.....	.....	
	M	8–02	.....	.....	.....	.....	.....	
	L	8–07 to	.....	.....	.....	.....	.....	
		9–45	.....	.....	.....	.....	.....	
	F	10–30	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1508								
June 22	e	(21–12–38)	.....	.....	.....	.....	.....	
	e	(21–16–23)	.....	.....	.....	.....	.....	
	eL	21–24	.....	.....	.....	.....	.....	
	L	21–45	30	.....	.....	.....	.....	
	L	21–48	24	.....	.....	.....	.....	
	L	21–51 to	.....	.....	.....	.....	.....	
		21–57	20	.....	.....	.....	.....	
	L	21–58 to	.....	.....	.....	.....	.....	
		22–03	18	.....	.....	.....	.....	
	L	22–03 to	.....	.....	.....	.....	.....	
		22–21	17	.....	.....	.....	.....	
	L	23–02	.....	.....	.....	.....	.....	
	F	23–14	.....	.....	.....	.....	.....	
1509								
June 24	eL	13–54	.....	.....	.....	.....	.....	Very heavy micros.
	F	.....	.....	.....	.....	.....	.....	Lost in changing sheets.
1510								
June 24	eL	20–32	.....	.....	.....	.....	.....	
	L	20–35	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Micros.
1511								
June 25	eL	(13–15)	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1512								
June 25	eL	22–14 to	.....	.....	.....	.....	.....	
		22–23	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1513								
June 26	eL	2–01	.....	.....	.....	.....	.....	
	F	2–10 ca	.....	.....	.....	.....	.....	
1514								
June 28	e?	19–04·3	.....	.....	.....	.....	.....	
	eL	19–12	.....	.....	.....	.....	.....	
	F	19–16	.....	.....	.....	.....	.....	
1515								
June 30	eL	0–29·5	.....	.....	.....	.....	.....	
	L	0–33	.....	.....	.....	.....	.....	
	F	0–50 ca	.....	.....	.....	.....	.....	
1516								
July 1	eL	8–49	.....	.....	.....	.....	.....	
	L	8–55 to	.....	.....	.....	.....	.....	
		9–11	18	.....	.....	.....	.....	
	F	9–33 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1517		h m s	s	μ	μ	μ	km.	
July 2	e?	2–21·5	.....	.....	.....	.....	.....	
	e?	2–39–04	.....	.....	.....	.....	.....	
	e?	2–51–00	.....	.....	.....	.....	.....	
	O	(2–45–49)	.....	.....	.....	.....	(7940)	
	eP?	2–57–07	.....	.....	.....	.....	.....	
	eS?	3–06·4	9	.....	.....	.....	.....	
	eL?	3–21–30	43	.....	.....	.....	.....	The L waves are fairly sinusoidal,
	L	3–30	23	.....	.....	.....	.....	never great in amplitude, and
	L	3–45	13	.....	.....	.....	.....	taper off rapidly in amplitude
	F	4–50	.....	.....	.....	.....	.....	after about 4–15.
1518								
July 2	e	16–59 to	14	.....	.....	.....	.....	
	F	17–10	.....	.....	.....	.....	.....	
1519								
July 3	e	18–02–35 to	.....	.....	.....	.....	.....	May not be seismic. On M-S only.
	F	18–11–15	.....	.....	.....	.....	.....	
1520								
July 4	e?	5–42–30	.....	.....	.....	.....	.....	Irregular faint trace of seismic
	e	5–44–30 to	.....	.....	.....	.....	.....	origin.
	F	6–13	.....	.....	.....	.....	.....	
1521								
July 4	O	(8–12–36)	.....	.....	.....	.....	(6180)	
	eP?	(8–22–17)	.....	.....	.....	.....	.....	
	iS?	8–30–03	.....	.....	.....	.....	.....	
	eL	8–39·5	.....	.....	.....	.....	.....	
	L	8–45	15	.....	.....	.....	.....	
	L	9–20	10	.....	.....	.....	.....	
	F	9–55	.....	.....	.....	.....	.....	
1522								
July 4	eL	23–55 to	.....	.....	.....	.....	.....	Sinusoidal L waves of small ampli-
July 5	L	0–05	18	.....	.....	.....	.....	tude.
	F	0–20	.....	.....	.....	.....	.....	
1523								
July 5	e	16–13 to	.....	.....	.....	.....	.....	Faint traces on M-S only. Irregular.
	L	16–38	.....	.....	.....	.....	.....	
1524								
July 6	e	6–06 to	.....	.....	.....	.....	.....	Sinusoidal L waves. Very small.
	L	6–15	17	.....	.....	.....	.....	On M-S only.
1525								
July 7	e	6–24–45	.....	.....	.....	.....	.....	
	e	6–29–40	.....	.....	.....	.....	.....	
	L_{17}	6–40 to	.....	.....	.....	.....	.....	
		6–45	14	.....	.....	.....	.....	
	F	7–05	.....	.....	.....	.....	.....	
1526								
July 7	eL	13–40 to	.....	.....	.....	.....	.....	Sinusoidal L waves of small ampli-
	L	13–46	20	.....	.....	.....	.....	tude. Beginning lost in changing
	L	13–53 to	.....	.....	.....	.....	.....	the sheets.
		14–00	14	.....	.....	.....	.....	
	F	14–15	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1527		h m s	s	μ	μ	μ	km.	
July 10	e?	0–41	.....	.....	.....	.....	.....	
	iS?	0–50–32	.....	.....	.....	.....	.....	
	eL?	1–00·5	.....	.....	.....	.....	.....	
	L	1–25	13	.....	.....	.....	.....	
	L	1–45	12	.....	.....	.....	.....	
	L	2–08	12	.....	.....	.....	.....	
	L	2–31	12	.....	.....	.....	.....	
	L	3–06	12	.....	.....	.....	.....	
	F	3–30	.....	.....	.....	.....	.....	
1528								
July 10	$e?_{17}$	5–48	.....	.....	.....	.....	.....	Very small amplitudes. On M-S No. 17 only.
	eL_{17}	6–00 to	.....	.....	.....	.....	.....	
	L_{17}	6–10	15	.....	.....	.....	.....	
	F	6–25	.....	.....	.....	.....	.....	
1529								
July 12	O	(3–19–40)	.....	.....	.....	.....	(10340)	The emergence of P is very doubtful
	eP_{11}	(3–32–58)	.....	.....	.....	.....	.....	at the time shown, though it is
	i_{17}	3–34–44	.....	.....	.....	.....	.....	evident a few seconds later. The
	iS_{17}	3–44–17	.....	.....	.....	.....	.....	agreement between the other
	SR_1	3–50–37	.....	.....	.....	.....	.....	phases, including LR_1 is extra-
	eL_{17}	4–06·5	.....	.....	.....	.....	.....	ordinarily good. The distance
	L	4–10 to	.....	.....	.....	.....	.....	may prove a little greater than
		4–15	23	.....	.....	.....	.....	that given here.
	L	4–20 to	.....	.....	.....	.....	.....	
		4–35	17	.....	.....	.....	.....	
	L	4–50 to	.....	.....	.....	.....	.....	
		5–10	15	.....	.....	.....	.....	
	L	5–15	15	.....	.....	.....	.....	
	LR_1	5–27	21	.....	.....	.....	.....	
	L	5–33 to	.....	.....	.....	.....	.....	
		5–42	16	.....	.....	.....	.....	
	F	6–10 ca	.....	.....	.....	.....	.....	
1530								
July 12	e_{17}	9–42–07	.....	.....	.....	.....	.....	
	$eS?_{17}$	9–48–40	.....	.....	.....	.....	.....	
	eL_{17}	10–06	32	.....	.....	.....	.....	
	L	10–13	21	.....	.....	.....	.....	
	L_{17}	10–17	16	.....	.....	.....	.....	
	L_{17}	10–29	14	.....	.....	.....	.....	
	L_{17}	10–40	14	.....	.....	.....	.....	
	F	11–05	.....	.....	.....	.....	.....	
1531								
July 13	O	11–14–45	.....	.....	.....	.....	9520	The maximum was recorded with
	P	11–27–24	.....	.....	.....	.....	.....	about the same period and ampli-
	PR_1	11–31–25	.....	.....	.....	.....	.....	tude, and at about the same time
	S	11–38–00	.....	.....	.....	.....	.....	on all three types of seismograph
	eL	11–58–00	.....	.....	.....	.....	.....	of quite different constants. Agree-
	L	12–06	29	.....	.....	.....	.....	ment very good for Δ.
	M	12–16	17	60	.....	.....	.....	
	L	12–30	17	.....	.....	.....	.....	
	L	13–00	15	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in changing sheets at about 13–30.

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1532								
July 13	e_{17}	16-47-40	.....	.....	.....	.....	.....	
	eL_{17}	16-57 to	.....	.....	.....	.....	.....	
		17-09	16	.....	.....	.....	.....	
	F	17-12	.....	.....	.....	.....	.....	
1533								
July 14	e	0-20-40	.....	.....	.....	.....	.....	
	e	0-30-40	.....	.....	.....	.....	.....	
	eL	0-42	32	.....	.....	.....	.....	
	L	0-51	25	.....	.....	.....	.....	
	L	0-59	18	.....	.....	.....	.....	
	L	1-13	16	.....	.....	.....	.....	
	L	1-26	16	.....	.....	.....	.....	
	L	1-42	12	.....	.....	.....	.....	
	F	2-00 ca	.....	.....	.....	.....	.....	
1534								
July 16	e_{17}	13-58-36	.....	.....	.....	.....	.....	
	i_{17}	14-04-15	.....	.....	.....	.....	.....	
	i_{17}	14-05-36	.....	.....	.....	.....	.....	
	i_{17}	14-08-29	.....	.....	.....	.....	.....	
	i_{17}	14-10-20	.....	.....	.....	.....	.....	
	$eS?_{17}$	14-14-58	.....	.....	.....	.....	.....	
	eL?	14-36	.....	.....	.....	.....	.....	L waves distinctly sinusoidal but of very small amplitude. Preliminary phase indications on M-S only.
	L	14-38 to	23	.....	.....	.....	.....	
		15-00	15	.....	.....	.....	.....	
	L	15-10	15	.....	.....	.....	.....	
	L	15-56	17	.....	.....	.....	.....	
	F	16-30	.....	.....	.....	.....	.....	
1535								
July 17	e?	1-10-15	.....	.....	.....	.....	.....	
	e	1-16-43	.....	.....	.....	.....	.....	
	e	1-20-00	.....	.....	.....	.....	.....	
	eL?	1-23·6 to	.....	.....	.....	.....	.....	Irregular L waves of small amplitude.
		1-33	.....	.....	.....	.....	.....	
	F	1-38	.....	.....	.....	.....	.....	
1536								
July 18	O	1-05-55	.....	.....	.....	.....	3600	Small record but very good agreement.
	P	1-12-43	.....	.....	.....	.....	.....	
	S	1-18-07	.....	.....	.....	.....	.....	
	eL	1-22 to	29	.....	.....	.....	.....	
		1-27	15	.....	.....	.....	.....	
	F	2-00 ca	.....	.....	.....	.....	.....	
1537								
July 18	O	6-02-13	.....	.....	.....	.....	3580	Undoubtedly from the same epicentre as No. 1536. The very characteristics of each phase are the same. A remarkable pair of records in the experience of this station.
	P	6-09-00	.....	.....	.....	.....	.....	
	S	6-14-22	.....	.....	.....	.....	.....	
	eL	6-18·5 to	29	.....	.....	.....	.....	
		6-28	15	.....	.....	.....	.....	
	F	7-00	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1538								
July 20	i	5–06–00	.....	.....	.....	.....	.....	Very small traces of L waves on M-S only.
	eL	5–20 to	.....	.....	.....	.....	.....	
	F	5–45	.....	.....	.....	.....	.....	
1539								
July 20	e	15–14–00	.....	.....	.....	.....	.....	On M-S only. Wireless from Strasbourg gives P = 15–12–00 Δ = 6000
	i	15–23–45	.....	.....	.....	.....	.....	
	eL	15–31	.....	.....	.....	.....	.....	
	L	15–36	28	.....	.....	.....	.....	
	L	15–47	16	.....	.....	.....	.....	
	L	16–05	14	.....	.....	.....	.....	M-S No. 23 not recording after July 20.
	F	16–52 ca	.....	.....	.....	.....	.....	
1540								
July 21	eL	14–13·5	.....	.....	.....	.....	.....	
	L	14–21 to	.....	.....	.....	.....	.....	
		14–30	13	.....	.....	.....	.....	
	L	14–40	.....	.....	.....	.....	.....	
	F	14–45	.....	.....	.....	.....	.....	
1541								
July 22	O	14–18–07	.....	.....	.....	.....	7320	Long continued appearance of L waves, quite sinusoidal, but of small amplitude.
	P	14–28–52	.....	.....	.....	.....	.....	
	S	14–37–40	.....	.....	.....	.....	.....	
	SR_2	14–45·5	.....	.....	.....	.....	.....	
	eL	14–51	.....	.....	.....	.....	.....	
	L	15–06	13	.....	.....	.....	.....	
	L	15–35	12	.....	.....	.....	.....	
	F	17–00 ca	.....	.....	.....	.....	.....	
1542								
July 23	e?	7–38–10	.....	.....	.....	.....	.....	Irregular L waves of small amplitude and short period.
	e	7–48–00 to	.....	.....	.....	.....	.....	
		7–55	.....	.....	.....	.....	.....	
	F	8–10	.....	.....	.....	.....	.....	
1543								
July 26	eL	(8–10) to	23	.....	.....	.....	.....	Sinusoidal L waves only. Time marks uncertain.
		(8–40)	15	.....	.....	.....	.....	
	F	(9–00)	.....	.....	.....	.....	.....	
1544								
July 26	eL	(10–50) to	30	.....	.....	.....	.....	Sinusoidal L waves only. Time marks uncertain.
		(11–15)	15	.....	.....	.....	.....	
	F	(11–50)	.....	.....	.....	.....	.....	
1545								
July 30	eL	23–53 to	20	.....	.....	.....	.....	M-S only.
July 31		0–05	10	.....	.....	.....	.....	
	F	0–10	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1546		h m s	s	μ	μ	μ	km.	
July 31	i	5–53–59	.....	.....	.....	.....	.....	
	i	5–54–48	.....	.....	.....	.....	.....	
	e	5–59	.....	.....	.....	.....	.....	
	L	6–01	9	.....	.....	.....	.....	
	F	6–20	.....	.....	.....	.....	.....	
1547								
July 31	e	15–23–00	.....	.....	.....	.....	.....	
	e	15–27–30	.....	.....	.....	.....	.....	
	e	15–39–50	.....	.....	.....	.....	.....	
	e	15–41–10	.....	.....	.....	.....	.....	
	eL	15–42 to	17	.....	.....	.....	.....	
		16–18	10	.....	.....	.....	.....	
	F	17–15	.....	.....	.....	.....	.....	
1548								
Aug. 1	eL	5–24	.....	.....	.....	.....	.....	No. 17 only.
		5–34	20	.....	.....	.....	.....	
	L	5–55	16	.....	.....	.....	.....	
	L	6–30	16	.....	.....	.....	.....	
	F	7–00	.....	.....	.....	.....	.....	
1549								
Aug. 1	i	8–37–20	.....	.....	.....	.....	.....	Very slight traces which are probably not seismic appear at 8–28.
	i	8–37–47	.....	.....	.....	.....	.....	
	eL	8–53	14	.....	.....	.....	.....	
	F	9–15	.....	.....	.....	.....	.....	
1550								
Aug. 2	e	9–45–24	.....	.....	.....	.....	.....	
	eL	9–48·2	10	.....	.....	.....	.....	
	L	9–52	6	.....	.....	.....	.....	
	F	9–55	.....	.....	.....	.....	.....	
1551								
Aug. 4	eL	17–13 to	20	.....	.....	.....	.....	Small sinusoidal L waves on No. 17 only.
		17–55	10	.....	.....	.....	.....	
	F	18–00	.....	.....	.....	.....	.....	
1552								
Aug. 8	eL	9–05	.....	.....	.....	.....	.....	No. 17 only.
	F	9–23	.....	.....	.....	.....	.....	
1553								
Aug. 8	e	11–04 to	.....	.....	.....	.....	.....	Very short periods, small amplitudes, L waves (?).
		11–15	5	.....	.....	.....	.....	
	F	11–18	.....	.....	.....	.....	.....	
1554								
Aug. 8	O	(12–01–48)	.....	.....	.....	.....	(3500)	
	iP?	12–08–28	.....	.....	.....	.....	.....	
	i	12–09–51	.....	.....	.....	.....	.....	
	eS?	12–13–45	.....	.....	.....	.....	.....	
	eL	12–16·5	.....	.....	.....	.....	.....	
	L	12–24	14	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in succeeding quake.

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1555								
Aug. 8	$eP?_v$	12–27–39	.....	.....	.....	.....	.....	There is no doubt that there are two distinct quakes here in 1554 and 1555. The P wave of 1555 is lost in the coda of 1554 in all records except the vertical.
	e	12–35·8	.....	.....	.....	.....	.....	
	$eL_{17}?$	12–42·7	.....	.....	.....	.....	.....	
	L_{17}	12–45·6	30	.....	.....	.....	.....	
	L_{17}	12–51	16	.....	.....	.....	.....	
	F	13–50 ca	.....	.....	.....	.....	.....	
1556								
Aug. 10	L	3–08 to	.....	.....	.....	.....	.....	No. 17 only.
	F	3–18	.....	.....	.....	.....	.....	
1557								
Aug. 10	eL	16–45	25	.....	.....	.....	.....	Sinusoidal L waves on No. 17 only. Micros heavy.
	L	16–55	30	.....	.....	.....	.....	
	L	17–05	25	.....	.....	.....	.....	
	F	17–20	.....	.....	.....	.....	.....	
1558								
Aug. 10	eL	23–08	.....	.....	.....	.....	.....	Sinusoidal L waves. No. 17. Heavy micros.
	L	23–15 to	27	.....	.....	.....	.....	
		23–45	15	.....	.....	.....	.....	
Aug. 11	F	0–10	.....	.....	.....	.....	.....	
1559								
Aug. 11	e	1–27·7	.....	.....	.....	.....	.....	Sinusoidal L waves. No. 17. Heavy micros.
	i	1–38	.....	.....	.....	.....	.....	
	eL?	1–51·5	40	.....	.....	.....	.....	
	L	1–59	26	.....	.....	.....	.....	
	L	2–05	23	.....	.....	.....	.....	
	L	2–20	16	.....	.....	.....	.....	
	L	2–38	13	.....	.....	.....	.....	
	F	3–15	.....	.....	.....	.....	.....	
1560								
Aug. 12	e?	6–55	.....	.....	.....	.....	.....	No. 17 only.
	e	7–04 to	.....	.....	.....	.....	.....	
		7–12	.....	.....	.....	.....	.....	
	L	7–13 to	.....	.....	.....	.....	.....	
		7–28	14	.....	.....	.....	.....	
	F	7–35	.....	.....	.....	.....	.....	
1561								
Aug. 12	e?	10–24–46	.....	.....	.....	.....	.....	
	e	10–25·2	.....	.....	.....	.....	.....	
	eL?	10–54	.....	.....	.....	.....	.....	
	L	11–01·5 to	28	.....	.....	.....	.....	
		11–35	12	.....	.....	.....	.....	
	F	12–00 ca	.....	.....	.....	.....	.....	
1562								
Aug. 12	eL	17–42 to	14	.....	.....	.....	.....	
	F	18–00						

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1563								
Aug. 16	e	20–44–40	.....	.....	.....	.....	.....	Sinusoidal L waves. Record on
	e?	20–53·8	.....	.....	.....	.....	.....	No. 17 only. Small amplitude.
	eL	21–03	22	.....	.....	.....	.....	
	L	21–12	20	.....	.....	.....	.....	
	L	21–20	.....	.....	.....	.....	.....	
	F	22–00 ca	.....	.....	.....	.....	.....	
1564								
Aug. 17	i	1–25–31	.....	.....	.....	.....	.....	No. 17 only. Sinusoidal L waves of
	e	1–24	.....	.....	.....	.....	.....	small amplitude.
	eL	1–45·5	18	.....	.....	.....	.....	
	F	2–15	.....	.....	.....	.....	.....	
1565								
Aug. 17	eL	4–27 to	20	.....	.....	.....	.....	No. 17 only.
	F	5–00 ca	.....	.....	.....	.....	.....	
1566								
Aug. 17	L	12–14 to	.....	.....	.....	.....	.....	No. 17 only.
		13–10	20	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in changing sheets.
1567								
Aug. 19	e	12–56·5	.....	.....	.....	.....	.....	No. 17 only.
	i	13–01–28	.....	.....	.....	.....	.....	
	eL?	13–18·5	.....	.....	.....	.....	.....	
	L	13–25	24	6	.....	.....	.....	
	L	13–35	18	.....	.....	.....	.....	
	L	13–46	16	.....	.....	.....	.....	
	F	14–15	.....	.....	.....	.....	.....	
1568								
Aug. 20	L	19–20 to	20	1	.....	.....	.....	
	F	20–10	.....	.....	.....	.....	.....	
1569								
Aug. 23	O	(5–21–31)	.....	.....	.....	.....	(5060)	
	eP	5–30–03	.....	.....	.....	.....	.....	Only traces on Bosch instruments.
	eS	(5–36·8)	.....	.....	.....	.....	.....	
	eL	5–42·9	18	6	.....	.....	.....	
	L	5–51	14	.....	.....	.....	.....	
	F	7–00 ca	.....	.....	.....	.....	.....	
1570								
Aug. 26	L	(14–30)	22	1·5	.....	.....	.....	Small sinusoidal waves. L easily read
	F	(15–15)	.....	.....	.....	.....	.....	but time marks uncertain.
1571								
Aug. 28	O	23–15–17	.....	.....	.....	.....	3470	
	iP	23–21–55	.....	.....	.....	.....	.....	
	iS	23–27–10	.....	.....	.....	.....	.....	
	eL	23–31	.....	.....	.....	.....	.....	
	M	23–34	(8)	(307)	.....	.....	.....	Period at M may have been greater
	L	23–49	14	58	.....	.....	.....	than 8 seconds as it was difficult
Aug. 29	L	0–18	11	8	.....	.....	.....	to determine.
	L	0–50	11	1	.....	.....	.....	
	F	2–00 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1572								
Aug. 30	L	(15–00)	18	1	.....	.....	.....	Time marks uncertain. No. 17 only record.
	F	(15–45)	.....	.....	.....	.....	.....	
1573								
Sept. 1	O	2–58–59	.....	.....	.....	.....	9760	
	eP	3–11–49	.....	.....	.....	.....	.....	
	iS	3–22–36	.....	.....	.....	.....	.....	
	eL	3–37	(60)	.....	.....	.....	.....	
	M	3–53·5	20	381	.....	.....	.....	
	L	4–03	17	171	.....	.....	.....	
	L	4–30	16	71	.....	.....	.....	
	L	4–54	14	37	.....	.....	.....	
	L	5–16	14	16	.....	.....	.....	
	L	5–48	14	9	.....	.....	.....	
	L	6–05	13	.....	.....	.....	.....	
	L	6–40	13	.....	.....	.....	.....	
	L	7–05	.....	.....	.....	.....	.....	
	eL	8–20	.....	.....	.....	.....	.....	
	L	8–25	28	15	.....	.....	.....	
	L	8–34	19	9	.....	.....	.....	
	L	8–50	13	.....	.....	.....	.....	
	F	9–50	.....	.....	.....	.....	.....	
	Saskatoon Record							
	O	2–58–35	.....	.....	.....	.....	8520	Good record on both horizontal components.
	P	3–10–25	.....	.....	.....	.....	.....	
	S	3–20–09	.....	.....	.....	.....	.....	
	eL	3–31·5 ca	.....	.....	.....	.....	.....	
	Halifax Record							
	O	2–58–55	.....	.....	.....	.....	10050	
	P	3–12–00	.....	.....	.....	.....	.....	
	PR_1	3–15–50	.....	.....	.....	.....	.....	
	S	3–23–00	.....	.....	.....	.....	.....	
	SR_1?	3–29–18	.....	.....	.....	.....	.....	
	eL	3–42–30	.....	.....	.....	.....	.....	
1574								
Sept. 2	O	2–47–11	.....	.....	.....	.....	9560	
	P	2–59–52	.....	.....	.....	.....	.....	
	PR_1	3–03–49	.....	.....	.....	.....	.....	
	S	3–10–30	.....	.....	.....	.....	.....	
	i	3–12–17	.....	.....	.....	.....	.....	
	SR_1	3–17–30	.....	.....	.....	.....	.....	
	eL	3–32	.....	.....	.....	.....	.....	
	M	3–48	19	247	.....	.....	.....	
	F	7–00	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1575								
Sept. 2	O	(9–24·1)	.....	.....	.....	.....	(9900)	Time marks failed on all seismographs.
	P	(9–37·0)	.....	.....	.....	.....	.....	
	PR_1	(9–40·7)	.....	.....	.....	.....	.....	
	S	(9–47·9)	.....	.....	.....	.....	.....	
	SR_1	(9–54·2)	.....	.....	.....	.....	.....	
	SR_2	(9–58·3)	.....	.....	.....	.....	.....	
	eL	(10–04)	.....	.....	.....	.....	.....	
	M	(10–22)	.....	.....	.....	.....	.....	
	F	(12–30)	.....	.....	.....	.....	.....	
1576								
Sept. 2	e	13–51	.....	.....	.....	.....	.....	M-S only.
	eL	13–57	.....	.....	.....	.....	.....	
	L	14–02 to	.....	.....	.....	.....	.....	
		14–07	.....	.....	.....	.....	.....	
	F	14–30 ca	.....	.....	.....	.....	.....	
1577								
Sept. 2	e	15–06·7	.....	.....	.....	.....	.....	
	L	15–10	.....	.....	.....	.....	.....	
	F	15–21 ca	.....	.....	.....	.....	.....	
1578								
Sept. 2	O	(22–38·6)	.....	.....	.....	.....	6340	Time marks uncertain.
	P	(22–48·5)	.....	.....	.....	.....	.....	
	S	(22–56·4)	.....	.....	.....	.....	.....	
	SR_1?	(23–01·7)	.....	.....	.....	.....	.....	
	eL	(23–05)	.....	.....	.....	.....	.....	
	M	(23–09)	Irreg.	.....	.....	.....	.....	
Sept. 3	F	1–10 ca	.....	.....	.....	.....	.....	
1579								
Sept. 9	O	4–18–18	.....	.....	.....	.....	.....	Very faintly defined.
	P	4–25–52	.....	.....	.....	.....	4220	
	S	4–31–52	.....	.....	.....	.....	.....	
	eL	4–36–30	.....	.....	.....	.....	.....	
	F	5–05	.....	.....	.....	.....	.....	
1580								
Sept. 9	eL	18–03·7	.....	.....	.....	.....	.....	Faint traces on M-S only.
	L	18–08	.....	.....	.....	.....	.....	
	F	18–15	.....	.....	.....	.....	.....	
1581								
Sept. 9	O	(22–13–17)	.....	.....	.....	.....	(5960)	
	P	(22–22–45)	.....	.....	.....	.....	.....	
	S	22–30–19	.....	.....	.....	.....	.....	
	eL	22–38–08	.....	.....	.....	.....	.....	
	M	23–00	34	.....	.....	.....	.....	
	L	23–04	(26)	.....	.....	.....	.....	
	L	23–18	(16)	.....	.....	.....	.....	
Sept. 10	F	1–20	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1582		h m s	s	μ	μ	μ	km.	
Sept. 10	e?	9–51·5	.....	.....	.....	.....	.....	
	eL	9–54	.....	.....	.....	.....	.....	
	L	9–59	.....	.....	.....	.....	.....	
	F	10–27 ca	.....	.....	.....	.....	.....	
1583								
Sept. 10	e?	12–52·5	.....	.....	.....	.....	.....	
	eL	12–55	.....	.....	.....	.....	.....	
	F	13–05	.....	.....	.....	.....	.....	
1584								
Sept. 11	e	9–15–52	.....	.....	.....	.....	.....	
	iS?	9–20–08	.....	.....	.....	.....	.....	
	eL	9–24	.....	.....	.....	.....	.....	
	L	9–27	.....	.....	.....	.....	.....	
	F	9–55 ca	.....	.....	.....	.....	.....	
1585								
Sept. 12	e?	(6–14)	.....	.....	.....	.....	.....	Time marks uncertain.
	i	(6–20·5)	.....	.....	.....	.....	.....	
	e	(6–23)	.....	.....	.....	.....	.....	Slight traces. Only on M-S.
	L	6–55	15	.....	.....	.....	.....	
	F	7–25	.....	.....	.....	.....	.....	
1586								
Sept. 14	e	.....	.....	.....	.....	.....	.....	Lost in changing sheets.
	eL	13–48 to	15	.....	.....	.....	.....	
	F	14–10	.....	.....	.....	.....	.....	
1587								
Sept. 16	e?	16–55–17	.....	.....	.....	.....	.....	M-S record only.
	i	16–55–59	.....	.....	.....	.....	.....	
	e	17–02–40	.....	.....	.....	.....	.....	
	e	17–07–27	.....	.....	.....	.....	.....	
	e	17–13–40	.....	.....	.....	.....	.....	
	eL	17–36·7	.....	.....	.....	.....	.....	Sinusoidal L waves.
	L	17–42	19	8	.....	.....	.....	
	L	18–01	15	.....	.....	.....	.....	
	L	18–44	18	.....	.....	.....	.....	
	F	19–25	.....	.....	.....	.....	.....	
1588								
Sept. 17	e?	4–03–10	.....	.....	.....	.....	.....	Faint traces only. M-S.
	e	4–11–24	.....	.....	.....	.....	.....	
	eL?	4–24	.....	.....	.....	.....	.....	
	L	4–32	.....	.....	.....	.....	.....	
	F	4–50	.....	.....	.....	.....	.....	
1589								
Sept. 17	i	7–32–45	.....	.....	.....	.....	.....	Sinusoidal L waves.
	eL	7–45	.....	.....	.....	.....	.....	
	M	7–52	28	12	.....	.....	.....	
	L	8–01	15	8	.....	.....	.....	
	L	8–20	12	.....	.....	.....	.....	
	F	9–00 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1590		h m s	s	μ	μ	μ	km.	
Sept. 18	L	4–38 to	.....	.....	.....	.....	.....	Faint sinusoidal L waves on M-S only.
	F	4–40	.....	.....	.....	.....	.....	
1591								
Sept. 19	e	8–39 to	.....	.....	.....	.....	.....	Irregular faint traces on M-S only.
	F	8–52	.....	.....	.....	.....	.....	
1592								
Sept. 19	e	19–47 to	.....	.....	.....	.....	.....	Faint traces only.
	F	19–58	.....	.....	.....	.....	.....	
1593								
Sept. 20	e	9–33 to	.....	.....	.....	.....	.....	Irregular faint traces only.
	F	9–49	.....	.....	.....	.....	.....	
1594								
Sept. 20	eL	(16–00)	.....	.....	.....	.....	.....	Faint sinusoidal L waves. M-S only.
	F	(16–02)	.....	.....	.....	.....	.....	Time uncertain.
1595								
Sept. 21	e?	20–24–15	.....	.....	.....	.....	.....	No. 17 only.
	eL	20–49 to	.....	.....	.....	.....	.....	Faint sinusoidal L waves.
		20–54	16	1	.....	.....	.....	
	L	21–00 to	14	.....	.....	.....	.....	
		21–06	.....	.....	.....	.....	.....	
	F	21–15	.....	.....	.....	.....	.....	
1596								
Sept. 22	e	(12–47)	.....	.....	.....	.....	.....	
	i	12–50·5	.....	.....	.....	.....	.....	
	F	13–10	.....	.....	.....	.....	.....	
1597								
Sept. 22	eL	15–50 to	23	.....	.....	.....	.....	
		16–25	17	.....	.....	.....	.....	Small amplitude—less than 1μ.
	F	16–35	.....	.....	.....	.....	.....	
1598								
Sept. 22	P?	21–04–20	.....	.....	.....	.....	.....	
	e	21–11·4	.....	.....	.....	.....	.....	
	i	21–15–28	.....	.....	.....	.....	.....	
	eL?	21–26	.....	.....	.....	.....	.....	
	L	21–29	50	70	.....	.....	.....	
	L	21–45	17	21	.....	.....	.....	
	L	22–04	14	3	.....	.....	.....	
	L	23–05	18	.....	.....	.....	.....	Very small trace at 23–05.
Sept. 23	F	0–00 ca	.....	.....	.....	.....	.....	
1599								
Sept. 23	eL	4–04 to	9	.....	.....	.....	.....	Regular faint traces of small amplitude and short period.
	F	4–30	.....	.....	.....	.....	.....	
1600								
Sept. 23	i	17–44–08	.....	.....	.....	.....	.....	
	e	17–47·8	.....	.....	.....	.....	.....	
	eL?	17–52·7	.....	.....	.....	.....	.....	
	M	17–57·5	11	6	.....	.....	.....	
	L	18–10	10	.....	.....	.....	.....	
	F	18–35	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1601								
Sept. 23	e	21–31·5	.....	.....	.....	.....	.....	No. 17 only.
	eL	21–35·6	.....	.....	.....	.....	.....	
	F	21–52	.....	.....	.....	.....	.....	
1602								
Sept. 24	eL	16–11	.....	.....	.....	.....	.....	Faint sinusoidal trace.
	F	16–13	.....	.....	.....	.....	.....	
1603								
Sept. 26	e?	(2–43)	.....	.....	.....	.....	.....	Time marks uncertain throughout.
	i	(2–47·7)	.....	.....	.....	.....	.....	No definite phase markings.
	eL	(2–54·3)	.....	.....	.....	.....	.....	
	L	3–10	13	.....	.....	.....	.....	
	F	3–50	.....	.....	.....	.....	.....	
1604								
Sept. 26	e	8–48·2	.....	.....	.....	.....	.....	No definite phases shown.
	eL?	9–05	.....	.....	.....	.....	.....	
	L	9–11	.....	.....	.....	.....	.....	
	M	9–19	20	.....	.....	.....	.....	
	L	9–26	14	.....	.....	.....	.....	
	L	9–43	14	.....	.....	.....	.....	
	L	10–03	14	.....	.....	.....	.....	
	F	10–40 ca	.....	.....	.....	.....	.....	
1605								
Sept. 27	e	(7–36·8)	.....	.....	.....	.....	.....	On M-S only. Faint traces. Sinu-
	eL?	(7–41·6)	.....	.....	.....	.....	.....	soidal L waves.
	L	8–05	16	.....	.....	.....	.....	
	L	8–25	16	.....	.....	.....	.....	
	F	9–00 ca	.....	.....	.....	.....	.....	
1606								
Sept. 28	e	21–15–10	.....	.....	.....	.....	.....	Except for about five minutes at the
	eL	21–18–50	.....	.....	.....	.....	.....	maximum, the record is a faint
	M	21–23	Irreg.	.....	.....	.....	.....	trace of irregular wavelets.
	F	22–05	.....	.....	.....	.....	.....	
1607								
Sept. 29	eL	7–46 to	.....	.....	.....	.....	.....	Very faint sinusoidal trace on No. 17
	F	7–58	.....	.....	.....	.....	.....	only.
1608								
Sept. 30	O	1–20–56	.....	.....	.....	.....	3040	
	P	1–26–56	.....	.....	.....	.....	.....	
	S	1–31–42	.....	.....	.....	.....	.....	
	eL?	1–34 ca	.....	.....	.....	.....	.....	
	M_{17}	1–40	12	300	.....	.....	.....	
	L	1–50	10	.....	.....	.....	.....	
	L	2–17	10	.....	.....	.....	.....	
	L	2–44	10	.....	.....	.....	.....	
	L	3–17	11	.....	.....	.....	.....	
	L	4–45	18	.....	.....	.....	.....	
	L	5–12	10	.....	.....	.....	.....	
	L	5–30 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1609								
Oct. 1	e?	8–55	.....	.....	.....	.....	.....	
	eL	9–04	30	.....	.....	.....	.....	
	L	9–13	19	.....	.....	.....	.....	
	L	9–19	16	.....	.....	.....	.....	
	F	9–48	.....	.....	.....	.....	.....	
1610								
Oct. 1	O	22–40–21	.....	.....	.....	.....	10040	Well-marked phases.
	P	22–53–25	.....	.....	.....	.....	.....	Very small amplitudes.
	S	23–04–25	.....	.....	.....	.....	.....	
	eL	23–24	31	5	.....	.....	.....	
	L	23–33	16	.....	.....	.....	.....	
	L	23–43	15	.....	.....	.....	.....	
Oct. 2	F	0–10	.....	.....	.....	.....	.....	
1611								
Oct. 3	eL	16–35	.....	.....	.....	.....	.....	
	L	16–42	18	.....	.....	.....	.....	
	F	16–55	.....	.....	.....	.....	.....	
1612								
Oct. 4	i	17–50–40	.....	.....	.....	.....	.....	Irregular traces preceded by a sharp impulse.
	L	18–03	.....	.....	.....	.....	.....	
	F	18–25	.....	.....	.....	.....	.....	
1613								
Oct. 7	O	(3–26–06)	.....	.....	.....	.....	(12140)	
	eP	3–51–09	.....	.....	.....	.....	.....	
	S	(4–03–35)	.....	.....	.....	.....	.....	
	e	4–08·5	.....	.....	.....	.....	.....	
	e_1	4–13·8	.....	.....	.....	.....	.....	
	eL_1	4–31	.....	.....	.....	.....	.....	Sinusoidal L waves.
	M	4–43	19	70	.....	.....	.....	
	L	4–50	19	30	.....	.....	.....	
	L	5–13	16	.....	.....	.....	.....	
	L	5–35	16	.....	.....	.....	.....	
	L	6–02	15	.....	.....	.....	.....	
	L	6–35	13	.....	.....	.....	.....	
	F	7–10	.....	.....	.....	.....	.....	
1614								
Oct. 8	O	3–52–28	.....	.....	.....	.....	1570	
	eP	3–55–49	.....	.....	.....	.....	.....	
	eS	3–58–33	.....	.....	.....	.....	.....	
	eL	3–59·5	.....	.....	.....	.....	.....	
	M	4–03	21	7	.....	.....	.....	
	L	4–06	13	.....	.....	.....	.....	Very faint L waves after 4–06.
	F	4–50	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1615								
Oct. 10	O	7–11–08	.....	.....	.....	.....	4460	
	iP	7–18–59	.....	.....	.....	.....	.....	
	iPR_1	7–20–30	.....	.....	.....	.....	.....	
	iS	7–25–12	.....	.....	.....	.....	.....	
	SR_1	(7–28·4)	.....	.....	.....	.....	.....	
	SR_2	(7–29·2)	.....	.....	.....	.....	.....	
	eL_{II}	7–31·5	.....	.....	.....	.....	.....	
	M_{17}	7–33	17	45	.....	.....	.....	
	L_{17}	7–42	9	10	.....	.....	.....	
	L	7–55	Irreg.	Small	.....	.....	.....	
	F	9–00 ca		.....	.....	.....	.....	
1616								
Oct. 10	e	23–06 to	.....	.....	.....	.....	.....	Faint traces of L waves on M-S only.
	F	23–30	.....	.....	.....	.....	.....	
1617								
Oct. 11	e	12–41·5	.....	.....	.....	.....	.....	
	eL?	12–45	16	.....	.....	.....	.....	Small sinusoidal L waves.
	L	12–52	13	.....	.....	.....	.....	
	L	13–00	13	1	.....	.....	.....	
	F	13–25	.....	.....	.....	.....	.....	
1618								
Oct. 13	e	4–41·3	.....	.....	.....	.....	.....	
	eL	4–46	.....	.....	.....	.....	.....	
	M	4–48	12	13	.....	.....	.....	
	L	5–01	7	.....	.....	.....	.....	
	F	5–30	.....	.....	.....	.....	.....	
1619								
Oct. 15	e	(8–25)	.....	.....	.....	.....	.....	Horizontal slit on M-S was partially
	eL?	(8–48)	.....	.....	.....	.....	.....	obscured by a bit of lint at light
	L	9–15	19	.....	.....	.....	.....	spot. No definite record.
	L	9–33	16	.....	.....	.....	.....	
	L	10–00	16	.....	.....	.....	.....	
	F	10–15 ca	.....	.....	.....	.....	.....	
1620								
Oct. 15	eL	20–45	.....	.....	.....	.....	.....	Faint sinusoidal L waves.
	L	20–46	12	1	.....	.....	.....	
	E	20–55	.....	.....	.....	.....	.....	
1621								
Oct. 17	e	6–54 to	.....	.....	.....	.....	.....	Irregular faint traces. M-S.
	F	7–08	.....	.....	.....	.....	.....	
1622								
Oct. 18	eL	22–13	.....	.....	.....	.....	.....	
	L	22–18	20	.....	.....	.....	.....	Sinusoidal L waves.
	F	22–25	.....	.....	.....	.....	.....	
1623								
Oct. 20	eL	4–06	30	.....	.....	.....	.....	Irregular to sinusoidal L waves.
	L	4–22	16	.....	.....	.....	.....	
	L	4–30	14	.....	.....	.....	.....	
	F	4–40	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1624								
Oct. 21	e	19–16–38	.....	.....	.....	.....	.....	Irregular small wavelets.
	F	19–35	.....	.....	.....	.....	.....	
1625								
Oct. 22	e	16–22·8	.....	.....	.....	.....	.....	Faint trace, M-S only. Lost in micros.
	F	16–33	.....	.....	.....	.....	.....	
1626								
Oct. 26	e	19–39 to	.....	.....	.....	.....	.....	
	F	19–49	.....	.....	.....	.....	.....	Irregular faint traces on M-S only.
1627								
Nov. 1	e	20–16–06	.....	.....	.....	.....	.....	New Zealand paper reports this quake as being observed by Adams at Wellington, N.Z., in adjusting a transit. The level bubble indicated the L waves.
	eL	20–16–37	.....	.....	.....	.....	.....	
	M	20–17·9	12	12	.....	.....	.....	
	L	20–20	7	2·5	.....	.....	.....	
	L	20–27	7	1	.....	.....	.....	
	F	20–58	.....	.....	.....	.....	.....	
1628								
Nov. 2	O	21–14–32	.....	.....	.....	.....	(10040)	Difficult record to read. eS uncertain as well as the correct reading for P.
	P_v	21–27–36	.....	.....	.....	.....	.....	
	eP	(21–28–24)	.....	.....	.....	.....	.....	
	PR_1	(21–32–09)	.....	.....	.....	.....	.....	
	PR_2	21–34–24	.....	.....	.....	.....	.....	
	eS	(21–38–36)	.....	.....	.....	.....	.....	
	SR_1	21–44–52	.....	.....	.....	.....	.....	
	SR_2	21–49–11	.....	.....	.....	.....	.....	
	eL	21–58–30	.....	.....	.....	.....	.....	
	M_1	22–19·5	18	72	.....	.....	.....	
	M_2	22–25·7	17	63	.....	.....	.....	
	M_3	22–28·5	17	50	.....	.....	.....	
	M_4	22–30	17	63	.....	.....	.....	
	L	22–33	17	.....	.....	.....	.....	
	L	22–39·5	17	.....	.....	.....	.....	
	L	23–07	24	.....	.....	.....	.....	
	L	23–16	.....	.....	.....	.....	.....	
Nov. 3	L	0–30	.....	.....	.....	.....	.....	
	F	1–00 ca	.....	.....	.....	.....	.....	
1629								
Nov. 3	eL	3–41	.....	.....	.....	.....	.....	Sinusoidal L waves
	L	3–48	20	0·5	.....	.....	.....	
	F	4–02	.....	.....	.....	.....	.....	
1630								
Nov. 3	e?	5–43	.....	.....	.....	.....	.....	Sinusoidal L waves
	eL	5–52·5	22	.....	.....	.....	.....	
	L	6–03·5	20	2·5	.....	.....	.....	
	L	6–16	15	.....	.....	.....	.....	
	F	7–05	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1631		h m s	s	μ	μ	μ	km.	
Nov. 3	O	8–37–43	.....	.....	.....	.....	2820	
	P	8–43–22	.....	.....	.....	.....	.....	
	S	8–47–52	.....	.....	.....	.....	.....	
	eL	8–50–00	.....	.....	.....	.....	.....	
	M	8–53	20	.....	.....	.....	.....	
	L	8–56	16	.....	.....	.....	.....	
	L	9–03	12	.....	.....	.....	.....	
	L	10–07	.....	.....	.....	.....	.....	
	L	10–25	.....	.....	.....	.....	.....	
	F	10–35 ca	.....	.....	.....	.....	.....	
1632								
Nov. 3	e	16–44–28	.....	.....	.....	.....	.....	
	eS?	16–56–00	.....	.....	.....	.....	.....	
	eL	17–05	.....	.....	.....	.....	.....	
	M_1	17–13	30	30	.....	.....	.....	
	M_2	17–19	20	20	.....	.....	.....	
	L	17–22·5	15	.....	.....	.....	.....	
	L	17–34	15	.....	.....	.....	.....	
	L	18–20	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1633								
Nov. 4	O	0–12–41	.....	.....	.....	.....	9000	
	P	0–24–54	.....	.....	.....	.....	.....	
	PR_2	0–30–12	.....	.....	.....	.....	.....	
	e	0–31–49	.....	.....	.....	.....	.....	
	S	0–35–04	.....	.....	.....	.....	.....	
	SR_1	0–41–24	.....	.....	.....	.....	.....	
	SR_2	0–45–28	.....	.....	.....	.....	.....	
	eL	0–55	.....	.....	.....	.....	.....	
	M_1	1–08·6	22	89	.....	.....	.....	
	M_2	1–10·5	22	90	.....	.....	.....	
	L	1–17	19	.....	.....	.....	.....	
	L	1–31	15	.....	.....	.....	.....	
	L	2–07	15	.....	.....	.....	.....	
	L	2–17	15	.....	.....	.....	.....	
	L	3–00	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	
1634								
Nov. 4	eL	12–53 to	.....	.....	.....	.....	.....	
	F	13–15	.....	.....	.....	.....	.....	Lost in micros.
1635								
Nov. 4	e	20–33·5	.....	.....	.....	.....	.....	
	e	20–40–56	.....	.....	.....	.....	.....	
	e	20–49–15	.....	.....	.....	.....	.....	
	eL	21–01–45	.....	.....	.....	.....	.....	
	L	21–06	26	.....	.....	.....	.....	
	M	21–10	20	6	.....	.....	.....	
	L	21–22	20	.....	.....	.....	.....	
	L	21–38	16	.....	.....	.....	.....	
	F	22–22 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1636		h m s	s	μ	μ	μ	km.	
Nov. 4	eL	23–15	.....	.....	.....	.....	.....	
	L	23–24	20	.....	.....	.....	.....	
	F	23–45	.....	.....	.....	.....	.....	
1637								
Nov. 5	L	2–23	22	.....	.....	.....	.....	
	F	2–37	.....	.....	.....	.....	.....	
1638								
Nov. 5	eL	14–37	.....	.....	.....	.....	.....	
	L	14–39	29	.....	.....	.....	.....	
	L	14–42	16	.....	.....	.....	.....	
	F	14–55	.....	.....	.....	.....	.....	
1639								
Nov. 5	O	21–29–07	.....	.....	.....	.....	10140	
	P	21–42–16	.....	.....	.....	.....	.....	
	PR_1	21–46–13	.....	.....	.....	.....	.....	
	PR_{21}	(21–48–18)	.....	.....	.....	.....	.....	
	S	21–53–20	.....	.....	.....	.....	.....	
	i	21–55–15	.....	.....	.....	.....	.....	
	SR_{21}	22–04·5	.....	.....	.....	.....	.....	
	eL	22–13	.....	.....	.....	.....	.....	
	M_1	22–16·0	44	105	.....	.....	.....	
	M_2	22–22·4	28	50	.....	.....	.....	
	M_3	22–27·5	24	35	.....	.....	.....	
	L	22–35·5	16	.....	.....	.....	.....	
	L	23–09 to	.....	.....	.....	.....	.....	
		23–55	16	.....	.....	.....	.....	
Nov. 6	F	1–00 ca	.....	.....	.....	.....	.....	
1640								
Nov. 6	i	17–38–08	.....	.....	.....	.....	.....	On M-S only.
	L	17–53	36	.....	.....	.....	.....	
	L	18–00	20	.....	.....	.....	.....	
	F	19–35 ca	.....	.....	.....	.....	.....	
1641								
Nov. 6	e	(20–00)	.....	.....	.....	.....	.....	
	eL	20–09	36	.....	.....	.....	.....	
	L	20–20·5	16	.....	.....	.....	.....	
	F	21–12 ca	.....	.....	.....	.....	.....	
1642								
Nov. 7	i	14–14–26	.....	.....	.....	.....	.....	
	L	14–30	.....	.....	.....	.....	.....	
	L	14–40	40	.....	.....	.....	.....	
	L	14–47	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in changing sheets.
1643								
Nov. 8	O	0–01–48	.....	.....	.....	.....	3600	
	P	0–08–36	.....	.....	.....	.....	.....	
	S	0–14–00	.....	.....	.....	.....	.....	
	SR_1?	0–15–26	.....	.....	.....	.....	.....	
	eL	0–17–00	8	11	.....	.....	.....	
	F	1–05 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1644		h m s	s	μ	μ	μ	km.	
Nov. 8	e	20–45·5	.....	.....	.....	.....	.....	Sinusoidal L waves on M-S No. 17 only.
	eL	20–53	.....	.....	.....	.....	.....	
	L	20–56·5	20	.....	.....	.....	.....	
	F	21–15 ca	.....	.....	.....	.....	.....	
1645								
Nov. 9	O	3–22–43	.....	.....	.....	.....	2880	
	P	3–28–28	.....	.....	.....	.....	.....	
	S	3–33–02	.....	.....	.....	.....	.....	
	eL	3–35–39	.....	.....	.....	.....	.....	
	L	3–38	.....	.....	.....	.....	.....	
	L	3–40	35	7	.....	.....	.....	
	L	3–45	.....	.....	.....	.....	.....	
	F	4–45 ca	.....	.....	.....	.....	.....	
1646								
Nov. 10	e	4–38	.....	.....	.....	.....	.....	
	eL	4–43	.....	.....	.....	.....	.....	
	F	5–12 ca	.....	.....	.....	.....	.....	
1647								
Nov. 10	eL?	22–00	.....	.....	.....	.....	.....	
	L	22–22	20	.....	.....	.....	.....	
	L	22–28	18	.....	.....	.....	.....	
	L	22–35	16	.....	.....	.....	.....	
	L	22–59	12	.....	.....	.....	.....	
	F	23–05	.....	.....	.....	.....	.....	
1648								
Nov. 11	e?	6–05	.....	.....	.....	.....	.....	May not be seismic.
	e	6–12	.....	.....	.....	.....	.....	
	F	6–15	.....	.....	.....	.....	.....	
1649								
Nov. 11	e	14–18	.....	.....	.....	.....	.....	
	eL	14–21	30	.....	.....	.....	.....	
	L	14–26	Irreg.	.....	.....	.....	.....	
	F	14–40		.....	.....	.....	.....	
1650								
Nov. 12	O	(11–56–21)	.....	.....	.....	.....	(3580)	Identification of the phases recorded is doubtful.
	P?	12–03–08	.....	.....	.....	.....	.....	
	S?	12–08–30	.....	.....	.....	.....	.....	
	SR_2?	12–10–38	.....	.....	.....	.....	.....	
	eL?	12–13	.....	.....	.....	.....	.....	
	L	12–20	30	5	.....	.....	.....	
	L	12–26	15	.....	.....	.....	.....	
	F	13–10 ca	.....	.....	.....	.....	.....	
1651								
Nov. 16	O	(4–15–22)	.....	.....	.....	.....	(4120)	
	P?	4–22–49	.....	.....	.....	.....	.....	
	S	4–28–43	.....	.....	.....	.....	.....	
	eL	4–33·5	.....	.....	.....	.....	.....	
	M_1	4–35·5	11	41	.....	.....	.....	
	M_2	4–38	10	21	.....	.....	.....	
	L	4–47	10	.....	.....	.....	.....	
	L	4–56	15	.....	.....	.....	.....	
	F	5–25 ca	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
1652		h m s	s	μ	μ	μ	km.	
Nov. 16	eL	7–26·3	.....	.....	.....	.....	.....	
	L	7–27–15	12	.....	.....	.....	.....	
	L	7–29–34	8	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Micros obscure the exact time of F.
1652A								
Nov. 16	eL	19–26	.....	.....	.....	.....	.....	Faint traces only of sinusoidal L
	L	19–30	20	.....	.....	.....	.....	waves on M-S No. 17.
	L	19–48·5	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1653								
Nov. 17	O	2–52–49	.....	.....	.....	.....	7120	
	P	3–03–23	.....	.....	.....	.....	.....	
	PR_2	3–07–24	.....	.....	.....	.....	.....	
	S	3–11–58	.....	.....	.....	.....	.....	
	SR_1	3–16–46	.....	.....	.....	.....	.....	
	SR_2	3–18–57	.....	.....	.....	.....	.....	
	eL	3–22	40	5	.....	.....	.....	
	M	3–32·5	16	14	.....	.....	.....	
	L	3–39	16	3	.....	.....	.....	
	L	3–46	16	.....	.....	.....	.....	
	F	5–10 ca	.....	.....	.....	.....	.....	
1654								
Nov. 18	e	(21–48·3)	.....	.....	.....	.....	.....	
	S?	21–57–39	.....	.....	.....	.....	.....	
	SR_1?	22–03–12	.....	.....	.....	.....	.....	
	eL	22–12	.....	.....	.....	.....	.....	
	L	22–18·5	.....	.....	.....	.....	.....	
	L	22–27	20	3	.....	.....	.....	
	L	22–38·5	.....	.....	.....	.....	.....	
	L	22–45	15	.....	.....	.....	.....	
	F	23–35	.....	.....	.....	.....	.....	
1655								
Nov. 19	eL	9–13·5	.....	.....	.....	.....	.....	
	L	9–17·3 to	.....	.....	.....	.....	.....	
		9–30	.....	.....	.....	.....	.....	
	F	.....	.....	.....	.....	.....	.....	Lost in micros.
1656								
Nov. 22	eL	8–19	.....	.....	.....	.....	.....	Sinusoidal L waves.
	L	8–28	18	1	.....	.....	.....	
	L	8–33	.....	.....	.....	.....	.....	
	F	8–45	.....	.....	.....	.....	.....	
1656A								
Nov. 23	e	3–22	.....	.....	.....	.....	.....	
	L	3–28	24	.....	.....	.....	.....	
	F	3–45 ca	.....	.....	.....	.....	.....	
1657								
Nov. 25	eL	(17–50)	.....	.....	.....	.....	.....	Time marks failed. Time approxi-
	L	(17–55)	38	.....	.....	.....	.....	mate.
	L	(17–59)	30	.....	.....	.....	.....	
	L	(18–06)	15	.....	.....	.....	.....	
	F	(18–40)	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1658								
Nov. 26	e	(13–05)	.....	.....	.....	.....	.....	Time marks failed. Time approximate.
	L	(13–26)	.....	.....	.....	.....	.....	
	M	(13–37)	24	5	.....	.....	.....	
	L	(14–07)	24	.....	.....	.....	.....	
	F	(14–34)	.....	.....	.....	.....	.....	
1659								
Nov. 26	e	16–26–00	.....	.....	.....	.....	.....	
	eL	16–32	.....	.....	.....	.....	.....	
	F	16–42 ca	.....	.....	.....	.....	.....	
1660								
Nov. 28	e?	0–40	.....	.....	.....	.....	.....	
	eL	0–49	15	.....	.....	.....	.....	Sinusoidal L waves—small.
	F	1–00 ca	.....	.....	.....	.....	.....	
1661								
Dec. 2	e	15–13·8	.....	.....	.....	.....	.....	M-S No. 17 only.
	L	15–40	19	5	.....	.....	.....	Sinusoidal L waves.
	L	16–00	16	.....	.....	.....	.....	
	F	17–00 ca	.....	.....	.....	.....	.....	
1662								
Dec. 3	eL	8–56	.....	.....	.....	.....	.....	M-S No. 17 only.
	L	8–59	19	1·5	.....	.....	.....	Sinusoidal L waves.
	F	9–15	.....	.....	.....	.....	.....	
1663								
Dec. 5	O	20–56–56	.....	.....	.....	.....	7640	
	iP_{17}	21–07–58	.....	.....	.....	.....	.....	
	iS_{17}	21–17–00	.....	.....	.....	.....	.....	
	eL	21–28·0	23	4·5	.....	.....	.....	V_L is very high—nearly 245 km/m. on an average.
	M	21–39	15	7	.....	.....	.....	
	L	21–43	13	1	.....	.....	.....	
	LR_1?	23–16	Irreg.	.....	.....	.....	.....	
	F	.....		.....	.....	.....	.....	Lost in what is recorded as 1664 but which may be the LR_2 of 1663.
1664								
Dec. 5	eL?	23–18	Irreg.	.....	.....	.....	.....	Sinusoidal L waves. Some micros.
	L	23–39	37	8	.....	.....	.....	
	L	23–57	25	3·5	.....	.....	.....	
Dec. 6	L	0–09	16	1	.....	.....	.....	
	F	0–50ca	.....	.....	.....	.....	.....	
1665								
Dec. 7	eL_{17}	(16–30)	.....	.....	.....	.....	.....	
	L_{17}	16–32 to	Irreg.	.....	.....	.....	.....	
	F	16–40	.....	.....	.....	.....	.....	
1666								
Dec. 11	eL_{17}	6–11	28	.....	.....	.....	.....	
	L_{17}	6–16	23	1·5	.....	.....	.....	
	L_{17}	6–24	16	1	.....	.....	.....	
	L_{17}	6–33	14	.....	.....	.....	.....	
	F	6–50	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Continued*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1667								
Dec. 13	e_{17}	17–05–06	.....	.....	.....	.....	.....	Micros mask the record a good deal.
	e_{17}	17–07·6	.....	.....	.....	.....	.....	
	eL_{17}	17–11	.....	.....	.....	.....	.....	
	L_{17}	17–12	Irreg.	.....	.....	.....	.....	
	F	17–25	.....	.....	.....	.....	.....	
1668								
Dec. 14	O	(10–42–23)	.....	.....	.....	.....	(1820)	Time marks somewhat blurred.
	iP_{17}	10–46–15	.....	.....	.....	.....	.....	Time uncertain.
	iS_{17}	(10–49–22)	.....	.....	.....	.....	.....	Strasbourg reports a quake by wireless.
	eL	(10–50)	.....	.....	.....	.....	.....	No trace of this appears on our records. Strasbourg
	M	10–58·5	23	9	.....	.....	.....	P =16–01–32, Δ =117 km.—
	L_{17}	11–08	10	.....	.....	.....	.....	Dec. 14.
	F	11–45 ca	.....	.....	.....	.....	.....	
1669								
Dec. 15	eL	12–52 to	Irreg.	.....	.....	.....	.....	Small L waves lost in micros.
	F	13–05	.....	.....	.....	.....	.....	
1670								
Dec. 16	O	7–36–48	.....	.....	.....	.....	.....	
	eP_{17}	7–45–03	.....	.....	.....	.....	.....	
	eS_{17}	7–51–34	.....	.....	.....	.....	.....	
	eSR_{117}	7–54·6	.....	.....	.....	.....	.....	
	eL	(7–58)	.....	.....	.....	.....	.....	Irregular L waves less than a micron
	F	8–20	.....	.....	.....	.....	.....	in amplitude.
1671								
Dec. 19	eL	20–14·5	(20)	.....	.....	.....	.....	Sinusoidal L waves lost in heavy
	F	20–20	.....	.....	.....	.....	.....	micros.
1672								
Dec. 22	O	(9–59–38)	.....	.....	.....	.....	(2940)	
	eP	(10–05–27)	.....	.....	.....	.....	.....	
	eS	10–10–06	.....	.....	.....	.....	.....	
	eL	10–13–00	40	23	.....	.....	.....	
	L	10–21	18	14	.....	.....	.....	
	L	10–25	14	6	.....	.....	.....	
	F	11–10 ca	.....	.....	.....	.....	.....	
1673								
Dec. 22	eL	18–15	.....	.....	.....	.....	.....	Faint trace of sinusoidal L waves in
	F	18–24	.....	.....	.....	.....	.....	micros.
1674								
Dec. 26	i	8–09–52	.....	.....	.....	.....	.....	
	e	8–10–50	.....	.....	.....	.....	.....	
	e	8–12–22	.....	.....	.....	.....	.....	
	eL	8–16–32	.....	.....	.....	.....	.....	
	L	8–19–18	.....	.....	.....	.....	.....	
	F	8–30	.....	.....	.....	.....	.....	

TABULAR LIST OF EARTHQUAKES—*Concluded*

No. and Date	Phase	Time	Period	Amplitude			Distance	Remarks
				A_E	A_N	A_Z		
		h m s	s	μ	μ	μ	km.	
1675								
Dec. 27	e	15–03	.....	.....	.....	.....	.....	Micros mask preliminary phases.
	e	15–09·4	.....	.....	.....	.....	.....	
	eL	15–28	26	4	.....	.....	.....	
	L	15–38	20	3	.....	.....	.....	
	F	15–45	.....	.....	.....	.....	.....	
1676								
Dec. 28	eL	23–07	.....	.....	.....	.....	.....	Micros mask much.
	L	23–15	22	4	.....	.....	.....	
	L	23–26	13	1	.....	.....	.....	
	F	23–45 ca	.....	.....	.....	.....	.....	

CONSTANTS OF THE SEISMOGRAPHS

$\phi = 45° 23' 38''$ N. $\lambda = 75° 42' 57''$ W. $h = 83$m.

Lithologic foundation: boulder clay over limestone (Ordovician). Time: Mean Greenwich, midnight to midnight. Time correction: within .25s.

INSTRUMENTS—FIXED CONSTANTS

Instrument	Symbol	Registration	Damping	Paper Speed	Mass
Bosch	I	Photographic	Air	15 mm. per min.	200 g.
Bosch	II	Photographic	Magnetic	15 mm. per min.	200 g.
Milne Shaw	17	Photographic	Magnetic	8 mm. per min.	1 lb.
Milne-Shaw	23	Photographic	Magnetic	8 mm. per min.	1 lb.
Deformation	D	Photographic	Air	17 mm. per min.	20 g. ca.
Spindler-Hoyer	W	Smoked Sheet	Air	15 mm. per min.	80 kgm.

INSTRUMENTS—DETERMINED CONSTANTS

SEISMOGRAPH I

Determined	T_o	V	ε	Comp.	Remarks
December, 1922	5·5	120	2:1	N-S	
February 7, 1923	5·5	120	2:1	N-S	
April 4, 1923	5·5	120	2:1	N-S	

INSTRUMENTS—DETERMINED CONSTANTS—*Continued*

SEISMOGRAPH II

Determined	T_o	V	ϵ	Comp.	Remarks
December, 1922	6·5	120	aper.	E-W	High period and strong damping were found to result in a badly defined zero. Hence the reduction of both.
February 7, 1923	6·5	120	18:1	E-W	
April 4, 1923	5·8	120	18:1	E-W	
May 3, 1923	5·3	120	18:1	E-W	
May 30, 1923	5·3	120	18:1	E-W	
August 21, 1923	5·4	120	15:1	E-W	

SEISMOGRAPH 17

December, 1922	12·0	250	20:1	E-W	
February 7, 1923	12·0	250	20:1	E-W	
April 4, 1923	12·0	250	20:1	E-W	
May 3, 1923	12·0	250	20:1	E-W	1″ tilt = 44·5 mm. displacement.
May 30, 1923	12·0	250	20:1	E-W	
August 21, 1923	12·0	250	20:1	E-W	

SEISMOGRAPH 23

December, 1922	12·0	250	20:1	E-W	In parallel with 17.
February 7, 1923	12·0	250	20:1	E-W	" 17.
March 9, 1923	12·0	250	15:1	E-W	" 17.
March 17, 1923	12·0	250	10:1	E-W	" 17.
April 4, 1923	12·0	250	10:1	E-W	" 17.
May 3, 1923	12·0	250	5:1	E-W	1″ tilt = 42·0 mm. displacement.
May 30, 1923	12·0	250	20:1	E-W	
July 21, 1923	12·0	250	20:1	E-W	At Shirley bay, Ont.
October 21, 1923	12·0	250	20:1	E-W	At Kemptville, Ont.
November 25, 1923	.....	.....	.....	.....	Out of service for rest of year.

SEISMOGRAPH W

December, 1922	6·0	160	20:1	Vert.	
February 7, 1923	6·0	160	20:1	Vert.	r = ·6 mm.
April 4, 1923	6·0	160	20:1	Vert.	r = ·6 mm.
May 3, 1923	6·0	160	20:1	Vert.	r = ·6 mm.
May 30, 1923	6·0	160	20:1	Vert.	r = ·6 mm.
August 22, 1923	5·5	160	4:1	Vert.	

The Deformation instrument was tested as to periods only with the following results. Numbers are values for T_o

	Determined for D_1(E-W)	Determined for D_2(N-S)
December, 1922	37.2	36.1
February 7, 1923	37.2	36.1

The time as recorded on the seismograph sheets is correct to within ± .25 sec.

As the time is impressed on the record line itself there are no corrections for parallax to be applied.

MICROSEISMS

During the year the microseisms were read four times each day, on both components. The periods and trace amplitudes were tabulated. The reductions of the trace amplitudes to true earth movement were not made. The tabulated values were not reported on in our bulletins, nor are they compiled for this report but they are on record here if desired. A notable microseism storm occurred on November 19-20, 1923. The records at Ottawa indicated a true earth movement (half-amplitude) of 6.5μ with a period of 7 sec.

EXPERIMENTAL WORK WITH THE MILNE-SHAW SEISMOGRAPHS

Milne-Shaw seismograph No. 17 was received in December, 1921, and records from it have been obtained regularly since June, 1922. In October, 1922, Milne-Shaw seismograph No. 23 arrived. It was placed in operation early in 1923 and on March 9 experimental work was begun with this instrument. It was first set up side by side with No. 17, of which it is the counterpart. Set on the same pier, with the same constants, and recording the same component, the records were practically identical for a number of earthquakes, some of them large ones.

The conditions were then kept constant except for the variation in the damping ratio. This was changed for No. 23 from 20:1 to 15:1 and later to 10:1 and then 5:1. Each time the instrument was kept long enough with the given damping ratio to get several earthquakes recorded both on No. 23 and on No. 17. It was found that the damping ratio began to seriously affect the record when set at 10:1 and that the seismograph was practically useless at 5:1 for the damping ratio. The records seemed to be practically identical when No. 17 was set at 20:1 and No. 23 at 15:1.

This series of experiments was interrupted to take No. 23 out to Shirley bay, Ont.—about eight miles approximately west of the Observatory. Here it was given the standard constants of No. 17 which remained in the vault at Ottawa. The magnification was set at 250 fold; the damping ratio was made 20:1; the undamped period adjusted to 12.0 sec. It was mounted to record the E-W component, in the same way as the Ottawa instrument, *i.e.* with the pillar at the south edge of the pier.

Shirley bay is a cove in the south bank of Ottawa river, near the Connaught Rifle Ranges. The shore is rocky and the soil a few feet inland is very shallow. A small grove of poplar is the only natural shelter. These are young trees a few inches in diameter. To the north of the site chosen, lake Deschenes, an expansion of the Ottawa, stretches, unbroken by islands, for a width of over two miles. It was found later that this was a distinct disadvantage as the winds off the lake were practically constant.

The seismograph was mounted on a cement pier, 6 feet long by 3 feet wide, built into the ground and about a huge boulder resting on the rock. The pier projected only about eight inches above the surface, and was sheltered by a tent. A cook tent, sleeping tent and an instrument tent were also pitched. A wireless mast, 55 feet high was rigged by Mr. J. P. Henderson, in charge of the observatory wireless work. Mr. Henderson's

efforts to assist in the work of the station by giving wireless time service from the observatory were indefatigable. Sending and receiving apparatus enabled the operator to communicate with the home station. The signals were sent out from the sidereal clock, two or three times a day. The same signals were impressed on the records at the observatory as were transmitted to Shirley bay and impressed on the records there. The different human link at each end would not, in all probability, cause an error on any sheet of more than half a second. Averaged over the whole time the time recorded would be comparable at will to a much closer approximation than that—well within the possibility of reading time on the record. A good box chronometer with a very even rate of about a second a day was used to impress the time on the seismograph sheet. When the sidereal check signals came in they were tapped with a telegraph key into the same electric circuit, superimposing the check times on the ordinary mean time signals, or, by throwing a switch, the mean time signals could be cut off while the others were being impressed on the record.

Mr. W. W. Doxsee, assistant seismologist, occupied this station from July 21 to September 7. The station was in operation at the time of the Japanese earthquake and good records were obtained from both No. 17 and No. 23.

After the instrument was partially dismounted for the return to Ottawa and after most of the camp equipment had been returned, it was found that conditions which had obtained while the seismograph was operating were such that the records may not have represented very accurately the ground movements. A fine spider thread, attached to the boom and from it directly to the pier about four inches below, was found to have interfered with any extended excursions of the boom. How long this thread was there could not be determined, although deflection tests had been made every time the instrument had a fresh paper sheet put on. However, as the operation of the instrument in its exposed position had not been satisfactory it was decided to return to Ottawa.

After the preliminary investigations had been carried out and arrangements made, piers built, etc., No. 23 was moved to a basement room of the dormitory of the Kemptville Agricultural School, about 35 miles approximately south of the home station. The principal, Mr. W. J. Bell, was most helpful in putting suitable quarters at our disposal. Again it was mounted with standard constants and exactly parallel with No. 17 at Ottawa, *i.e.* with the pillar at the south end of the pier. The instrument began to record on October 21 and continued to register till November 27. During this time some twenty earthquakes were recorded and also the great microseism storm of November 19-20. Mr. Doxsee was again in charge. Special precautions were taken to get time corrections by wireless.

So far as the work of examining the sheets has gone, there seems to be no possibility of correlating the microseisms, but the earthquake records show phases of similar nature for which the times can be rigorously compared.

THE GREAT EARTHQUAKES OF 1923

To the general public the Japanese catastrophe of September 1 looms up as the greatest earthquake of this or of many years past. But on February 3, last, an earthquake (No. 1387) was registered, which is the greatest record ever made at Ottawa. This seems to have occurred in the north Pacific. The exact location has not yet been fixed. The preliminary location from the records of Ottawa, Honolulu and Georgetown place it at a point $\varphi = 51°$N., $\lambda = 170°$E. This point is approximately 3,000 miles from Hawaii. In seven hours the tidal wave, travelling over 400 miles an hour, reached the shores of that island and, washing high up the bank, destroyed much of the shipping and caused quite extended damage to property along the shore as well as some loss of life.

The Japanese earthquake was well recorded at Ottawa on five instruments and at Shirley bay on Milne-Shaw No. 23.

EXHIBITS PREPARED

The Seismologic division prepared exhibits for the Canadian exhibition train to France and for the Canadian section at the British Empire exhibition. These consisted of transparencies from photographs of the seismographs and of the records registered at the Dominion Observatory.

THE NEW SEISMOGRAPH MOUNTING

A special mounting was devised for the Milne-Shaw seismograph No. 23, to enable the instrument to be readily turned into any azimuth from N-S component to E-W component registration, *i.e.* through 90°. The fact that the essential parts of the instrument can be supported on a disc of cast iron 3 inches thick and 2 feet in diameter, floating on the surface of mercury, made this possible. The recording apparatus can be moved over and adjusted rapidly by gauge. The mounting was designed by the seismologist and made at the Observatory machine shop by Mr. L. Christensen.

THE GENERAL OFFICE SYSTEM

Considerable time has been devoted to devising a system of office management which would define the routine work to be attempted, enable it to be done without needless repetition or copying of records and render the data readily accessible.

The new system was put into effect on December 1, 1923. It will be described in the monograph mentioned in the introduction to this present volume (page 2). It depended for its possibility of existence on a comparatively simple reproducing outfit for making *accurate* forms cheaply. On November 20, 1923, a new Edison-Dick Mimeograph, No. 78, was obtained, complete with full electrical equipment, arranged for hand or machine feed, together with a Mimeoscope, No. 1, completely equipped with tools. With this outfit, forms devised for the particular needs of this division were made out and reproduced. This equipment is also used in making bulletins sent out each month, and is invaluable for the work of the division. This system has now been in operation for some months. Notes are being kept of suggestions for improvement and simplification. Those which seem worth while will be incorporated in the forms for next year, 1925, as changes in the system will be made only at the ends of years.

DOMINION OBSEVATORY, OTTAWA,
FEBRUARY, 1924

APPENDIX A

SEISMOLOGIC PUBLICATIONS OF DR. OTTO KLOTZ

Not appearing in the series, *Publications of the Dominion Observatory*

1. Report of the Chief Astronomer, 1906.—Appendix I.
2. Earthquakes.
   Trans. of the the Ottawa Lit. and Scien. Soc., 1906-07.
3. The Surveyor and Earthquakes.
   Association of Ontario Land Surveyors, 1907.
4. Report of the Chief Astronomer, 1907.—Appendix II.
5. Earthquakes and the Interior of the Earth.
   Jour., R.A.S.C., Vol. II, No. 2, 1908.
6. Microseisms.
   Jour., R.A.S.C., Vol. II, No. 4, 1908.
7. Report of the Chief Astronomer, 1908.—Appendix I.
8. The Persian Earthquake of January 23, 1909.
   Jour., R.A.S.C., Vol. III, No. 2, 1909.
9. Report of the Chief Astronomer, 1909.—Appendix I.
10. Microseisms.
    Trans. Roy. Soc. of Can., Third Series, Vol. III, 1909.
11. Some Scientific Crumbs from Europe.
    Jour., R.A.S.C., Vol. IV., No. 1, 1910.
12. The Seismograph.
    Jour., R.A.S.C., Vol. IV. No. 2, 1910.
13. Earthquake Epicentres.
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APPENDIX B

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   Natural Resources, Canada, Vol. II. No. 10, 1923.
10. Seismology in Canada.
    Canada Year Book, 1922-23.

APPENDIX C

SEISMOLOGIC NUMBERS

Appearing previous to 1924 in the series, *Publications of the Dominion Observatory*

1. Stereographic Projection Tables, Otto Klotz, LL.D.
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2. Earthquake of April 28, 1913, Otto Klotz, LL.D.
   Pub. Dom. Obs., Vol. I. No. 5, 1913.
3. Earthquake of February 10, 1914, Otto Klotz, LL.D.
   Pub. Dom. Obs., Vol. III. No. 1, 1915.
4. Seismological Tables, Otto Klotz, LL.D.
   Pub. Dom. Obs., Vol. III. No. 2, 1916.
5. The Effect of Cooling on a Cement Pier, Ernest A. Hodgson, M.A.
   Pub. Dom. Obs., Vol. V. No. 2, 1921.
6. The Location of Epicentres, 1917-18. Ernest A. Hodgson, M.A.
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8. The Location of Epicentres, 1920. W. W. Doxsee, M.A.
   Pub. Dom. Obs., Vol. VIII. No. 2, 1922.

APPENDIX D

SYMBOLS USED

O = Time of shock at the epicentre or origin.
P = Preliminary, longitudinal waves, and time of arrival.
PR_1 = P waves, once reflected, and time of arrival.
PR_2 = P waves, twice reflected, and time of arrival.
etc.
S = Secondary, transverse waves, and time of arrival.
SR_1 = S waves, once reflected, and time of arrival.
SR_2 = S waves, twice reflected, and time of arrival.
etc.
e = Emersio, emergence of a phase not sharply defined and time of arrival, or may be used to qualify the nature of other phases.
i = Impetus, a sharply defined phase and time of arrival, or may be used to qualify the nature of other phases.
L = Long or surface waves, and time of arrival.
LR_1 = L waves reaching the station through the antipodes of that station, *i.e.* by a path 40,000 km. $- \Delta$
LR_2 = L waves reaching the station by a path 40,000 km. $+ \Delta$
Δ = The distance, measured about the surface of the earth from the epicentre to the station.
M = Maximum of L waves and time of arrival.
M_1, M_2, *etc.* = Successive maxima where these occur.
N-S Component = that seismograph which *registers* the earth movement in a north-south line. Similarly the E-W Component and the Vert. Component.
M-S = Refers to the Milne-Shaw seismographs.

A'_E A'_N A_Z = True earth movement (half amplitude), measured in microns. (Subscripts indicate the components east-west, north-south or vertical)

φ = Latitude.
λ = Longitude.
μ = Micron = ·001 mm.
h = Height above sea-level.
ca. = approximately.
T_o = Oscillation time (complete), of undamped seismograph.
h.m.s. = Hours, minutes, and seconds, in Greenwich Mean Time, midnight to midnight.
I = Bosch, photographic seismograph, N-S Component.
II = Bosch, photographic seismograph, E-W Component.
17 = Milne-Shaw seismograph, at present an E-W Component.
23 = Milne-Shaw seismograph, used experimentally in 1923.
D_1 = E-W Component of Deformation Instrument.
D_2 = N-S Component of Deformation Instrument.
W = Wiechert, vertical seismograph.
ϵ = Damping ratio.
V = Magnification.
V_L = Velocity of L waves.
g = grammes.
lb. = pounds avoirdupois.
Kgm. = kilogrammes.
mm. = millimeters.
m. = meters.

Where the interpretation of a phase is doubtful, though the time may be accurately known, a question mark follows the symbol for the phase, as P?.

Where the exact time is not known, though confidence in the interpretation of the phase exists, brackets surround the figures. Similar brackets indicate the doubtful figures in other parts of the report.

Subscripted letters after the symbol for phase indicate the component or the instrument from which the phase was read, as P_E, L_{17}, *etc.*

"Small" in the amplitude column, indicates a true earth amplitude, smaller than 1 micron.

"HALIFAX RECORD" and "SASKATOON RECORD" indicate the Ottawa readings from the Mainka seismographs at Dalhousie University and at the University of Saskatchewan, respectively.