

# OTTAWA

## Earthquake Station, Dominion ~~Astronomical~~ Observatory



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From January 1st., 1920 to January 31st., 1920. No. 1.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1055	Jan. 4	0	4-22-03					3440
		eP	4-28-39		S waves seem to have short period P waves of a second quake superimposed upon them			
		eS	4-33-52					
		eL?	4-37.7					
		L	4-45	15				
		L	4-55	8				
		F	5-15					
1056	" 30	0	18-28-07					
		eP	18-35-12					
		ePR <sub>1</sub> ?N	18-36-06					
		S	18-40-49					
		L	18-44-20	24				
		L	18-48					
1057	" 30	L <sub>2</sub>	20-30 15 20-40					
				20				

There were traces of disturbances at 6h. Jan. 14 and at 11.40 on the same date but all phases were lost in very heavy micros. The disturbance may not have been seismic.

*Ernest C. Hodgson*



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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From February 1st., 1920 to February 10th., 1920 No. 2.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE					
					A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>						
			h. m. s.	s.	μ	μ	μ	km.					
1058	Feb. 2	PR <sub>1</sub> ?	11-42-44		Δ approx. 12,500 Km. as shown by the times of eL and LR <sub>1</sub> , which are both well marked. Early phases lost.								
		e?	11-48-16										
		eL	12-13	50									
		L	12-28	23									
		L	12-40	18									
		L	12-54	17									
		L	13-11	16									
		LR <sub>1</sub>	13-15	25									
		L	13-25	22									
		L	13-35	18									
		L	13-45	16									
		LE	14-09	13									
		F	---- lost in changing the sheets.										
		HALIFAX RECORD.									Epicentre probably in the East Indies.		
			PR <sub>1</sub> ?	11-44-58									
	e?	11-50											
		eL	12-15.5										
1059	" 7	i <sub>N</sub> eL	12-01-28 12-05 to 12-09	15	Early phases lost in heavy micros.								
1060	" 8	L	6-54 to 7-10	19	Faint traces only.								
1061	" 10	e? <sub>E</sub> L? <sub>E</sub> L? LE	9-42-20 9-46-16 10-11 10-19 to 10-40	18									
		LE	11-10 to 11-15	18									
		L	11-20										
		F	11-40										

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From February 10th., 1920. to February 29th., 1920. No. 3.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE		
					$A_E$	$A_N$	$A_Z$			
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.		
1062	Feb. 10	O	22-07-22					2900		
		P	22-13-09							
		SN	22-17-44							
		LE	22-20-20							
		L	22-22 to							
			22-31	21						
		L	22-35 to							
			22-47	15						
		L	22-50	14						
		L	23-06	13						
		L	23-25	13						
		FE	24-50							
		HALIFAX RECORD.								
				O	22-07-26					2610
		P	22-12-44							
		S	22-17-08							
1063	" 12	eE	0-35-02							
		eL	0-41							
		F	0-55							
1064	" 22	i	17-47-25							
		i	17-56-51							
		eE	17-59-36							
		L?	18-10 to							
		F	18-35							
1065	" 28	O	18-44 ca.				(5000)			
		P?	18-52.5	P on	Deformation Inst. only.					
		S?	18-59-12		Early phases poor on the					
		eL	19-06.		seismographs due to					
		L	19-15	25	micros.					
		F	19-25							

*Ernest C. Hobbs*



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## Earthquake Station, Dominion ~~Seismological~~ Observatory



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From March 1st., 1920. to March 20th., 1920. No. 4.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1066	March 9	L	4-52					
		F	5-10					
1067	" 10	e <sub>N</sub>	16-27-14					
		e	16-27-52					
		L <sub>E</sub>	16-28-48					
		F <sub>E</sub>	16-33					
1068	" 15	O	12-16-43					9360
		eP <sub>E</sub>	12-29-38					
		e <sub>E</sub>	12-35-42					
		eS <sub>E</sub>	12-40.5					
		L <sub>E</sub>	13-00	32				
		L <sub>E</sub>	13-06	22				
		L	13-09	18				
		L	13-17	17				
		L	13-24					
		F	13-45					
1069	" 19	e?E	17-52-22					
		e	17-53-36					
		i	17-54-22					
		L?	17-56-44					
1070	" 20	e	18-00-52					
		e	18-07-30					
		eL?	18-09.7					
1071	" 20	O	18-31-23					9560
		P <sub>N</sub>	18-44-04					
		S	18-54-42					
		SR <sub>1E</sub>	19-00-30					
		eL?	19-09 to					
		L	19-17	35	L waves too soon by almost three minutes.			
		L	19-18 to					
			19-21	18				
		L	19-24 to					
			19-32					
		F	20-55					

*Ernest C. Hodgson*



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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From March 21st., 1920. to March 31st., 1920. No. 5.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1072	March 22	L	2-42 to		Irregular L waves.			
			2-47					
		L	2-50 to					
			3-05					
		L	3-06 to					
		F	3-10					
1073	" 22	o <sup>?E</sup>	20-30-04					
		e <sup>?E</sup>	20-43-36					
		L	20-55 to					
			20-58	30				
		L	20-59 to					
			21-10	22				
		L <sup>E</sup>	21-15 to					
	21-20	16						
1074	" 23	O	(15-21-53)					(3400)
		iP?	15-28-25					
		iS?	15-33-35					
		L	15-36.5					
		F	16-15					
1075	" 29	O	5-07-50		Well marked quake but small and irregular L waves after M.			3780
		P	5-14-55					
		S	5-20-36					
		L	5-25					
		M	5-27 to					
			5-31					
		L	5-35 to					
	5-45	42						
	6-45							

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From April 1st., 1920. to April 30th., 1920. No

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE	
					$A_E$	$A_N$	$A_Z$		
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.	
1076	April 6	O?	16-43-22					3800?	
		il?	16-50-25						
		S?	16-56-00						
		F	Lost in micros about 17-10						
1077	.. 11	e	23-25-08	to	Very irregular small waves.				
		F	24-00		Possibly not seismic.				
1078	.. 16	e?	22-47.5						
		e?	22-48.8						
		eL	23-00 to	24					
		F	23-12	17					
1079	.. 18	e	21-29-28	2	May not be seismic.				
		e	21-29-55	4					
		F	Lost in micros about 21-35.						
1080	.. 19	O	21-06-26					3420	
		P	21-13-00						
		S	21-18-12						
		eL?	No regular sinusoidal periods. Irregular						
		F	small waves with micros to 21-55.						

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From May 1st., 1920.

to May 31st., 1920.

No. 7

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_V$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1081	May 7	eL	6-35 to 7-20	24 18				
1082	" 7	e eL L L L F	21-51.6 22-22 22-35 22-46 23-00 23-30	4 40 28 18 15				
1083	" 8	e	21-28 to 21-45		Very faint. May not be seismic.			
1084	" 8	e	23-36 to 23-55		Very faint. May not be seismic.			
1085	" 26	e L <sub>E</sub>	13-11 to 13-30 13-20 to 14-00		L waves on EW very small but regular and sinusoidal. L waves on NS very irregular.			

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From June 1st., 1920. to June 30th., 1920. No. 8.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km
1086	June 2	e? eL? F	22-14.8 22-19.5 to 22-35 22-55	6	Irregular waves of small amplitude. May not be seismic.			
1087	" 4 <sup>5</sup>	P? S? L	4-40 (ca) 4-50 (ca) 5-08		A large earthquake. The record was unfortunately spoiled through a fogged sheet.			
1088	" 9	e <sub>N</sub> F	11-53-09 to 11-59 12-25	6	No evidence of resolution into phases.			
1089	" 18	e	10-25.5 to 10-37	4 to 8				
1090	" 22	e	3-05-52 to 3-25	6				

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From July 1st., 1920.

to July 7th., 1920.

No. 9

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1085	May 30.	•N •E •L? LN F	Lost in micros. 25-05 21-06-20 21-07-50 21-35-00		Omitted in reading the May sheets as it appeared to be local.			
1091	July 2	o PR? •S? •L L LE LE F	Lost in small micros at about 19 hr. 19-11 ca) 19-16 ca)		From Deformation Instrument only. (18 mm. = 1 hr.)			
					30			
					20			
					18			
					15			
1092	" 2	• •L F	21-55.9 21-59-48 22-40		May not be seismic.			
1093	" 7	O? P? S? •L N L F	18-41-34 18-49-04 18-55-00 19-00 ca) 19-10 19-45		irregular.			(4160)

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From July 7th., 1920. to July 31st., 1920. No. 10

No.	DATE	PHASE	TIME			PERIOD	AMPLITUDE			DISTANCE
			h.	m.	s.		$A_E$	$A_N$	$A_Z$	
						s.	$\mu$	$\mu$	$\mu$	km.
1094	July 7	•N •L M <sub>N</sub> F	23	22	48		Small irregular record.			
			23	32	00					
			23	35						
			23	55						
1095	" 8	•N •N M <sub>N</sub> F	0	54	00		Small irregular record.			
			0	58	20					
			1	03						
			1	35	00					
1096	" 11	•N i i • F	1	40	40		Small irregular waves			
			1	48	12	4	resembling micros.			
			1	50	08	6				
			1	55	5	to				
			2	2	20					
1097	" 16	O P S L L L F	17	15	9		NS lost in generator			
			17	22	9		disturbance.			
			17	28	5					
			17	32	7	26				
			17	40		12				
			18	00						
1098	" 26	O F	5	34	40		Faint trace only.			
			6	00	00					

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TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From August 1st., 1920 to August 15th., 1920 No. 11.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1099	Aug 3.	•? F.	3-23-04 4-40 ca.		Small disturbance resembling micros.			
1100	" 3	O PN SE •L L L F	19-57-20 20-08-48 20-18-15 20-31-30 20-40 20-51 21-30					8140
1101	" 13	i i • i or L i i F	2-13-30 2-14-06 2-16-27 2-22-08 2-22-50 2-24-00 3-50		Irregular short periods of 2 to 4 sec. closely resembling micros. May not be seismic.			
1102	" 15	O •P SE SR <sub>1</sub> E •L L LE LE LE LE LR <sub>1</sub> E F	8-22-08 8-35-10 8-46-08 8-52.7 9-07 9-26 9-29 9-39 10-00 10-31 10-40					10000

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LATITUDE  $45^{\circ} 23' 38''$ , LONGITUDE  $75^{\circ} 42' 57''$  or  $5^{\text{h}} 02^{\text{m}} 51^{\text{s}}.8$  W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight.

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From August 15th., 1920 to August 31st., 1920 No. 12.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km
1103	Aug. 20.	O?	16-15-43					(9140)
		e?N	16-22-30					
		iP?	16-28-03					
		iS?	16-38-21					
		eE	16-43-20					
		eLE?	16-52.5	40				
		L	17-09	18				
		L	17-17 to	13				
		L	17-25					
		LE	17-36	12				
		LE	18-00	13				
		LE	18-20	13				
F	18-30							
					Phases do not agree very well as giving a $\Delta$ .			
					O and $\Delta$ are given with reservation.			
1104	" 21	eE	21-26-26					
		L	21-37	11				
		F	21-51					
1105	" 26	O	23-00-04					6200
		iP	23-09-46					
		PR <sub>1</sub> E	23-12-13					
		eS	23-17-33					
		eL?	23-27.5					
		L	23-31	24				
		LE	23-44	18				
		LE	0-05	13				
		LE	0-25	12				
		F	1-00					
1106	" 29	eLE	11-50-23 to 12-05	to 21				

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## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From September 1, 1920. to September 8, 1920 No. 3.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>	
1107	Sep. 4	O	( <sup>h</sup> 14- <sup>m</sup> 17- <sup>s</sup> 16 )	s.	μ	μ	μ	( 8780 <sup>km.</sup> )
		P?E	14-29-17					
		S?E	14-39-16					
		eL?E	14-57					
		LE	15-07	21				
		LE	15-20	19				
		LE	15-30	17				
		LE	15-40	16				
		LE	15-45	16				
		LR <sub>1</sub> ?E	16-34.5					
F	16-40							
1108	" 7	O	5-55-44					6450
		P	6-05-41					
		S <sub>E</sub>	6-13-41					Italian earthquake.
		eL	6-25-12					
		I <sub>E</sub>	6-30	17				Epicentre in northern
		F	6-42	13				Italy.
1109	" 8	O?	1-49 ca.					(10000)
		PR <sub>1</sub> N?	2-05-25					
		eL	2-06-27					
		i <sub>E</sub>	2-10-51					Δ obtained through
		i <sub>E</sub>	2-12-00					approx. agreement in
		S <sub>N</sub> ?	2-12-58					
		eLN	2-53	40				
		L	2-35	40				PR <sub>1</sub> E, S <sub>N</sub> , eL and LR <sub>1</sub> E
		L	2-39	22				
		LE	2-48	18				O obtained by sub-
		LE	2-53	16				
		LE	3-08	16				tracting I <sub>S</sub> at 10000
		LE	3-12	14				from S <sub>N</sub> at 2-13 ca.
LE	3-20	14						
LE	3-28	13						
LR <sub>1</sub> E	4-00	20						
F	4-20							

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TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From September 8, 1920. to September 20, 1920. No. 14.

No.	DATE	PHASE	TIME			PERIOD	AMPLITUDE			DISTANCE
							$A_E$	$A_N$	$A_Z$	
			h.	m.	s.	s.	$\mu$	$\mu$	$\mu$	km.
1110	Sep. 9	oPR <sub>2</sub> ?	19	15	31					
		e	19	26	23					
		e	19	32	47					
		oL?	19	43	8					
		L <sub>1</sub>	19	46		35				
		L <sub>2</sub>	19	55		28				
		L <sub>3</sub>	20	00		23				
		L <sub>4</sub>	20	05		20				
		L <sub>5</sub>	20	16		20				
		L <sub>6</sub>	20	28		17				
		L <sub>7</sub>	20	35		15				
		L <sub>8</sub>	21	00		23				
		L <sub>9</sub>	21	15						
1111	" 13.	oL <sub>1</sub> oL <sub>2</sub> L <sub>1</sub>	0	02	30	19	NS Component masked in microseisms.			
			0	05	38					
			0	22						
1112	" 20	O	14	45	12					9660
		PV	14	57	57					
		L <sub>1</sub>	15	04	55					
		L <sub>2</sub>	15	06	27					
		Sy	15	08	40					
		oL <sub>1</sub>	15	29	0	50				
		L <sub>1</sub>	15	40		27				
		M <sub>1</sub>	15	45		20	1000 $\mu$	90 $\mu$	600 $\mu$	
		L <sub>1</sub>	15	55		17				
		L <sub>2</sub>	16	06		17				
		L <sub>3</sub>	16	21		15				
		L <sub>4</sub>	16	45		24?				
		L <sub>5</sub>	16	56		17				
L <sub>6</sub>	16	56.8		16						
L <sub>7</sub>	18 hrs									

*Ernest A. Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From **September 20, 1920.** to **September 30, 1920.** No. **15.**

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1113	Sep. 21	eL <sub>E</sub>	3-35 to	24 to	NS component completely obscured by micros.			
			3-48	18				
		L <sub>E</sub>	3-53	16				
		F	4-10					
1114	" 21	e	18-04-24	15				
		eL?E	18-19					
		L <sub>E</sub>	18-25.5					
		L <sub>E</sub>	18-30					
		L <sub>E</sub>	18-40					
		F	19- ca.					
1115	" 24	O	21-54-54	22				4340
		PN	22-02-37					
		PR <sub>1</sub> N	22-04-07					
		S	22-08-43					
		eL <sub>E</sub>	22-11-16					
		L <sub>E</sub>	22-15-.5					
		L <sub>E</sub>	22-28					
		F	23-15					
1116	" 27	O?	5-24-34	20				(4220)
		PE?	5-32-08					
		SE?	5-38-08					
		eL	5-43-38					
		L	5-54					
		L	6-03					
F	6-30							
1117	" 28	e	0-31-54					
		F	0-56-00					

*Ernest A Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



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TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From to No.

No.	October 1st. 1920.		1920.		October 8th. 1920.			16.		
	DATE	PHASE	TIME			PERIOD	AMPLITUDE			DISTANCE
			h.	m.	s.		A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>	
						s.	μ	μ	μ	km.
1118	Oct. 1	o e F	19-02-25	Micros interiore with the registration of the preliminary phases.						
1119	" 5	o oL? L F	19-22.5 19-23 19-24.3 to 19-30 19-50		10					
1120	" 7	O P S iE iE oL'E LE L L F	20-55-18 21-04-51 21-11-51 21-12-33 21-14-11 21-19-16 21-22 21-30 21-40 22-ca		28 22 16			5700		
1121	" 8	O? P S <sub>N</sub> oL F	16-50-28 16-57-16 17-02-40 17-06-25 17-50 ca					(3600)		
									Irregular waves in L phase	

Ernest A Hodgson



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From October 8th., 1920. to October 24th., '20. No. 17.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE			
					<i>A<sub>E</sub></i>	<i>A<sub>N</sub></i>	<i>A<sub>Z</sub></i>				
			h.    m.    s.	s.	μ	μ	μ	km.			
1022	Oct. 18	O	8-11-49					8780			
		iP <sub>V</sub>	8-23-50	LR <sub>1</sub> recorded sharply on the deformation instrument, 10-30							
		iS <sub>V</sub>	8-33-49								
		eL <sub>V</sub>	8-52.4								
		L <sub>V</sub>	8-55		28						
		LR <sub>1</sub> def.	10-30								
		F <sub>V</sub>	9-hrs.ca.								
		HALIFAX RECORD.									
		O	8-11-52								9100
		eP <sub>N</sub>	8-24-10		Halifax and Ottawa records taken together indicate an epicentre in the Kurile Ids.						
iS <sub>N</sub>	8-34-26										
eL	8-52-56										
1023	Oct. 20	eE	10-54.5	24							
		eLE	11-03.5								
		F	11-20								
1024	" 22	O	12-09-51	irregular 18			7390				
		iP <sub>NV</sub>	12-20-46								
		i <sub>N</sub>	12-25-30								
		iS <sub>NV</sub>	12-29-35								
		i <sub>E</sub>	12-30-20								
		i <sub>EN</sub>	12-31-22								
		eL	12-37.5								
		L	13-00								
		F	13-18								
1025	" 24	eLE	2-42-40								
		F	2-50-ca.								

*Ernest A. Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From October 24th., 1920. to October 31st., '20. No. 18.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1126	Oct. 28	eE	(7-43-00)					
		eLE	7-53-08					
		L	7-56-48	20				
		L	8-02-45	16				
		L	8-19-00	12				
		F	8-50					
1127	" 28	O	12-50-11					8080
		P <sub>N</sub>	13-01-36					
		PR <sub>1N</sub>	13-04-45					
		PR <sub>2N</sub>	13-06-21					
		S <sub>N</sub>	13-11-00					
		i <sub>N</sub>	13-11-24					
		i <sub>N</sub>	13-12-12					
		SR <sub>1N</sub>	(13-16-14)					
		SR <sub>2N</sub>	(13-19-10)					
		eLNE?	13-25-08					
		L	13-26-45	24				
		L	13-23	28				
		F	14-30					

Reported in press as  
being 900 miles  
from La Plata.

*Ernest A Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From Nov. 1, 1920.

to Nov. 28th., 1920.

No. 19

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE
					$A_E$	$A_N$	$A_Z$	
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.
1128	Nov. 4	e F	2-21-40 2-45	irreg	Lost in micros.			
1129	" 6	e <sub>E</sub> eL <sub>E</sub> L <sub>E</sub> F	10-55-47 11-00-21 11-08-31 11-15	12	NS lost in micros.			
1130	" 8	e e	19-26-00 19-27-33		Reported from St. Thomas de Joliette, Que.			
1131	" 12	e eL L F	6-00-33 6-07-17 6-11 6-40	20				
<del>1032</del> 1132	" 16	O iP S eL <sub>E</sub> L <sub>N</sub> F	8-30-54 8-38-09 8-43-54 8-48-32 8-49-23 9-35	irreg 32				3960
		SASKATOON RECORD						
		eP iS L	8-55-08 8-39-14 8-41 ca					2510
<del>1033</del> 1133	" 26	eL F	9-24-00 9-50	20 to 14				
<del>1034</del> 1134	" 28	eL F	11-46-54 12-18		Irregular L waves of small amplitude.			

*Ernest A. Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From **Nov. 28, 1920.** to **Nov. 30, 1920.** No. 20

No.	DATE	PHASE	TIME			PERIOD	AMPLITUDE			DISTANCE
			h.	m.	s.		s.	$A_E$	$A_N$	
							$\mu$	$\mu$	$\mu$	km.
1135	Nov. 29	O ePN S eL L F	8-05-10 8-12-09 8-17-41 8-20-52 8-35 9-00			23 12				3740

Ernest A. Hodgson



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From *December 1st., 1920* to *December 13th., 1920* No. *21*

No.	DATE	PHASE	TIME		PERIOD	AMPLITUDE			DISTANCE
						$A_E$	$A_N$	$A_Z$	
						$\mu$	$\mu$	$\mu$	
			h.	m.	s.	s.			km.
1136	Dec. 5	e?E eLE LE F	10-30.5 10-37.3 10-39.5 Lost in micros		20		Faint record, almost lost in heavy micros.		
1137	" 7	eL eL F	15-34.0 15-51-30 Lost in micros.	17 23			Two short records of L waves of small amplitude. Balance obscured in micros.		
1138	" 10	O iPv iSN eLNE L L L F	4-26-19 4-38-33 4-48-45 5-05.7 5-12 5-25 5-35 6-00		24 19 16		Quakes reported from Honduras about this date. No trace on our records of those quakes. 9020		
1139	" 11	O (P) <sub>N</sub> (S) <sub>N</sub> (eL) <sub>E</sub> L F	21-25-41 ? 21-30-45 21-34-48 21-36.9 21-41 22 ca.		22		Very irregular micros of considerable magnitude obscure the record. (2470)		
1140	" 13	e?E eLE LE LE F	4-19-25 4-39 4-52 5-02 Lost in micros.		40 21 16				

*Ernest A Hodgson*



# OTTAWA

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TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From Dec. 13th., 1920 to Dec. 16th., '20 No. 22.

No.	DATE	PHASE	TIME	PERIOD	AMPLITUDE			DISTANCE			
					$A_E$	$A_N$	$A_Z$				
			h. m. s.	s.	$\mu$	$\mu$	$\mu$	km.			
1141	Dec. 16	O	12-06-45					9590			
		P <sub>NV</sub>	(12-19-27)								
		S	12-30-06								
		eE	12-37-13								
		iN	12-38-04								
		eLE	12-46	60							
		LN	12-52	45							
		LE	12-52	36							
		L	13-07	25							
		L	13-20	18							
		L	13-36	17							
		L	13-55	16							
		L	14-12	15							
		LR <sub>1</sub>	14-17	20							
		L	14-40	18							
		LE	14-55	18							
		F	16hrs								
		SASKATOON RECORD					The last hour's record very faintly marked.				
				O	12-05-56					9600	
				P <sub>N</sub>	12-18-39					Ottawa and Saskatoon $\Delta$ circles define an epicentre 41°N, 62°5E but the arcs are almost parallel and the long value is poorly defined. The epicentre occurred about 41°N but farther east. An approximation might be given as 41°N 85°E with the possibility of the centre of the disturbance being even farther east in approximately the same latitude.	
		S <sub>N</sub>	12-29-19								
		SR <sub>1N</sub>	12-35-25								
		eLN	12-44								
		MN	12-56								
		F	15-ca								

*Ernest A. Hodgson*



# OTTAWA

## EARTHQUAKE STATION, DOMINION OBSERVATORY



LATITUDE 45° 23' 38", LONGITUDE 75° 42' 57" or 5<sup>h</sup> 02<sup>m</sup> 51<sup>s</sup>.8 W. Greenwich, ALTITUDE 83m.

TIME: Mean Greenwich, midnight to midnight

INSTRUMENTS: Two Bosch photographic horizontal pendulums, one Spindler and Hoyer 80 kg. vertical seismograph.

From December 16th, 1920 to December 31st, 1920, No.23

No.	DATE	PHASE	TIME		PERIOD	AMPLITUDE			DISTANCE
						$A_E$	$A_N$	$A_Z$	
7			h.	m.	s.	$\mu$	$\mu$	$\mu$	km.
1142	Dec. 17	eE	19	20	50				Probably occurred in Albania. Not well recorded here.
		eLE	19	39		35			
		LN	19	48.3		20			
		L	20	00		17			
		F	20	15					
1143	" 25	eE	12	03					
		eLE	12	17.5		13			
		LE	12	20.5		23			
		L	12	30		18			
		F	13	10 ca					

*Ernest A. Hodgson*