

# TORONTO

1923

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 79° 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—~~Two Milne-Shaw Seismographs.~~ Milne horizontal pendulum North.

FROM... January..1st., 1923..... To.. January..31st., 1923.....

DATE	PHASE	TIME h. m s.	PERIOD	Amplitude			DISTANCE km
				A <sub>N</sub> μ	A <sub>E</sub> MM.	A <sub>Z</sub> μ	
JANUARY							
2nd.	eL	23 13 54					
	iL	23 15 54					
	M	23 17 48			0.4		
	F	23 47 42					
8th	E?	22 13 48					
	L?	22 35 18			0.1		
22nd.	P	9 11 42					
	S	9 17 36					
	i	9 20 00					
	L	9 23 18					
	L	9 24 18					
	M	9 27 42			10.0		4120. Northern California
	L	9 40 30					
	eL	10 04 12					
	F	11 18 48					
27th	iL	8 14 42					
	M	8 14 54			0.4		
	F	8 17 12					
27th	iL	8 34 12					
	F	8 35 36			0.2		

Period of Boom 18 seconds.  
Pillar inclination 1 MM=0.46

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## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—*Milne horizontal, North*  
~~Two Milne-Shaw Seismographs.~~

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
			h   m   s.	s-	μ	μ MM	μ	km
	Feb. 1st	L	20 26 36					Long distance quake.
		eL	20 32 18					
		M	20 34 54			0.5		
		L	21 05 36					
		F	21 14 36					
	Feb. 2nd.	e	1 28 18					
		L	1 35 54					
		L	1 45 00					
		M	1 53 12			1.3		
		L	1 59 12					
		F	3 11 24					
	Feb. 2nd.	P	5 19 36					S fairly large.  7380
		iS	5 28 24			0.4		
		iL	5 37 00					
		i	5 43 54					
		L	5 47 12					
		M	5 50 12			6.7		
		L	7 04 30					
		eL	7 21 54					
		eL	8 07 00					
		F	8 25 00					
	Feb. 3rd.	iP	16 13 18			1.0		F waves large amplitude  4.0  Over 30.0  7380 From 16h 39m to 17h 9m the boom moved a large number of times over the range of paper.
		i	16 15 12					
		i	16 17 48					
		iS	16 22 06					
		i	16 26 48					
		i	16 31 30					
		iL	16 36 48					
		iL	16 37 48					
		eL	18 56 48					
		eL	19 15 54					
		eL	19 51 42					
		eL	20 39 36					
		F	22 29 06					
	Feb. 4th	eL	3 50 36					Thickening.
		F	3 03 24			0.05		
	Feb. 4th	L	13 13 06					0.05
		F	13 23 12					

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LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—~~Two Milne Shaw~~ Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					<sup>A</sup> <sub>N</sub>	<sup>A</sup> <sub>E</sub>	<sup>A</sup> <sub>Z</sub>	
					$\mu$	$\mu$	$\mu$	
			h. m s.	s-				km
						MM		
	Feb. 5th	L	12 21 06					
		F	12 31 18				0.1	Thickening.
	Feb. 5th	L	23 35 42					
		eL	23 37 06					
		M	23 39 12				0.3	
		F	0 06 24					
	Feb. 8th	e	0 53 00					
		eL	0 57 12					
		M	0 58 30				0.2	
		eL	1 06 06					
		F	1 18 36					
	Feb. 8th	eL	8 30 48					
		eL	8 32 24					
		M	8 38 12				0.2	
		F	8 48 30					
	Feb. 11th	eL	17 52 54					
		M	17 55 12				0.2	Doubtful as to being seismic
		eL	18 03 42					
		F	18 07 24					
	Feb. 11th	L	23 22 54					
		eL	23 23 54					
		M	23 25 30				0.4	Uniform and continuous vibrations up to 23h 35m from eL
		F	23 54 42					
	Feb. 12th	S?	2 27 18					
		L	2 35 12					
		eL	2 36 30					
		M	2 39 00				1.3	
		eL	2 55 42					
		F	3 03 18					
	Feb. 12th	L	3 26 54					
		F	3 31 24				0.1	May be return waves from Antipodes.

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Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—~~Two Milne-Shaw Seismographs.~~  
*Milne horizontal pendulum, North*

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>	
					μ	μ	μ	
			h. m s.	s-				km
	Feb. 14th	L	17 38 42			MM		
		F	17 44 18			0.1		Thickening.
	Feb. 19th	eL	0 17 36					
		M	0 20 30			0.4		
		eL	0 29 54					
		F	0 43 12					
	Feb. 21st.	eL	1 33 12					
		M	1 36 18			0.2		
		F	1 46 54					
	Feb. 23rd.	L	7 10 00					
		L	7 22 42			0.1		
		F	7 34 12					
	Feb. 24th	PR	7 53 54					
		iS	7 56 06			1.0		
		SR orS	7 57 24					
		eL	8 00 18					
		eL	8 03 30					
		i	8 10 36					
		i	8 13 42					
		M	8 15 24			10.0		
		eL	8 35 42					
		eL	8 40 06					
		iL	9 07 18					
		L	9 20 30					
		eL	9 53 12					
		eL	10 10 36					
		eL	10 36 18					
		F	11 16 42					

Period of Boom 18 seconds. Pillar inclination 1 MM=0.46

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LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—~~Two~~ Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
					μ	μ	μ	
	MARCH.		h. m s.	s-				km
	1st.	i	? 8 48 30					
		L	8 56 42					
		eL	8 59 30					P & S not recorded.
		L	9 01 18					
		M	9 03 18			0.6		
		F	10 10 30					
	2nd.	S	17 10 12					
		e	17 28 06					
		L	17 41 36					
		iL	17 46 24					
		eL	18 00 18					
		eL	18 06 48					
		M	? 18 11 12			0.8		Max may have come in after 18h 18m, attending instrument
		eL	18 14 06					
		F	19 28 48					
	3rd.	L	22 36 42					
			to					
			23 20 00				0.05	
	4th	L	7 52 30					
		L	7 54 42					
		L	8 10 00					
		M	8 17 06				0.2	
		F	10 02 00					
	11th.	L	23 26 36					
		L	23 28 42					
		M	23 29 48				0.2	
		F	0 01 00					
	12th.	L	9 59 42					
		F	10 02 42				0.1	
	12th	L	10 19 00					
		L	10 51 30					
		F	11 13 42				0.05	
	12th	L	12 06 48					
		L	12 20 36					
		iL	12 35 12					
		M	12 35 30				0.2	
		eL	12 59 42					
		F	13 26 18					

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FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
					μ	μ	μ	
			h   m   s.	s-				km
	MARCH							
	13th	L F	20 28 00 21 00 00				MM. 0.05	
	14th	L L L M F	21 56 30 22 07 00 22 19 36 - 22 29 42				0.3	P & S not recorded.
	15th.	eL eL M F	6 17 42 6 20 00 6 24 36 7 01 00				0.5	P & S not recorded. Gradually increasing vibrations.
	16th	L L eL M L F	23 01 06 23 09 42 23 21 18 23 26 12 23 29 42 0 37 48				0.8	Trace faint from 22h 15m to 22h 50m.
	18th	L F	20 44 12 20 59 00				0.05	
	19th	eL iL M F	11 31 24 11 34 48 11 35 36 Small micros.				0.8	P & S indistinct.
	24th	L F	8 52 48 9 10 36				0.05	
	24th	e L L iL M eL eL eL F	13 14 24 13 24 18 13 30 24 13 41 12 13 43 12 13 48 24 14 21 36 14 50 00 14 53 12 15 38 18				2.8      0.4	Boom fairly steady from 14h 38m 30s to 14h 50m 00s.
	26th	L F	15 29 54 15 36 42				0.05	

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INSTRUMENTS—~~Two Milne-Shaw Seismographs~~

FROM April 1st. To .....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
			h . m . s.	s-	μ	μ	μ	km
	APRIL					MM		
	13th	L	13 36 00			0.1		
		F	13 42 48					
	13th	S?	15 52 48					
		I	15 59 36					
		eL	16 03 54					
		iL	16 08 06					
		M	16 14 48			2.0		
		M <sub>2</sub>	16 16 48			2.0		P indistinct
		eL	16 27 42					
		M	16 31 36			0.7		
		F	17 40 42					
	13th	L	21 16 00			0.05		
	19th	L	4 00 00					
		L	4 22 30					
		eL	4 35 06					
		M	4 39 06			0.4		
		F	5 22 42					
	23rd	eL	4 15 30					
		M	4 19 42			0.3		P & S not recorded.
		eL	4 21 30					
		eL	4 25 36					
		eL	4 38 36					
		F	5 27 36					
	24th	iL	23 04 48			0.1		
		F	23 16 06					
	25th	e	19 50 48					
		eL	19 52 30					
		M	19 52 48			0.3		
		eL	20 06 54					
		F	20 22 30					
	29th	L	3 14 06			0.1		
		F	3 18 54					
	30th	L	16 41 36			0.1		
		F	17 14 00					
	30th	L	21 00 36			0.1		
		F	21 18 36					

Period 18 seconds. Pillar inclination 0.45

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NO.	DATE	PHASE	TIME			PERIOD	Amplitude			DISTANCE
							A N	A E	A Z	
							μ	μ	μ	
	1923.		h. m s.		s-				km	
2488	May 2nd. (Milne)	L M	16 45 30 16 45 48				mm. 0.3		Recorded on Milne-Shaw, but no cut-offs	
2489.	4th	P S i L M F	16 37 54 16 43 42 16 47 54 16 54 06 16 58 24 20 10 42				mm. 5.0			
	(Milne)	M1 M8	16 51 15 16 57 15	9 15			79 181	Early phases lost N-S amp. = 152		
2490	4th	P S i e M1 M2 L L F	22 38 29 22 47 18 22 47 26 22 56 15 22 48 11 23 00 38 23 00 45 23 01 05 ? 0 49 45	7   23 8 23			11 37	7390		
2491	8th	e e L L F  e L F	19 20 15 19 22 42 19 32 20 ? 19 34 08 20 17 30  19 23 20 19 34 15 20 17 30	      15 to 20				E-W component. Very small ampl.  N-S component. Small amplitude.		
2492.	10th	e e or L  L F	4 01 00 4 10 00 to 4 25 15 4 45 38 20 10 00	   18			-	Small amplitude		
2493.	11th	e L F	8 44 30 9 08 00 ? 10 05 00				-	Minute slow waves		



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FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km							
					A <sub>N</sub> μ	A <sub>E</sub> μ	A <sub>Z</sub> μ								
2494	1923. MAY 12th	i	1 39 38	7 23 30	21			The E-W not so much affected.							
		i	1 42 42												
		i	1 43 19												
		e	1 51 22												
		S	1 52 53												
		eL	2 02 20												
		L	2 34 43												
M	2 46 15 to														
F	2 48 10														
		F	3 38 37												
2495	15th	P	21 53 52	15				E-W component. Very small amplitude.							
		S?	22 03 31												
		L	22 19 00												
		L	22 31 35												
		F	23 35 35												
		S	22 03 32					N-S component.							
2496	23rd	P	22 48 28	20	48			7460							
		S	22 57 21												
		e	22 57 32												
		eL	23 05 08												
		L	23 13 18 to												
		L	23 16 15												
		M	23 14 48												
		F	2 22 45												
									P	22 48 33					
									S	22 57 22					
		eL	23 04 01	19 to 23	27			7390. Uniform L waves, 23h 13m 18s to 23h 16m 15s.							
		L	23 05 00												
		M	23 14 52												
		F	2 15 37												
2497.	25th	L(EW)	22 43 37					Times doubtful no cut-off very small amp.							
		L	22 45 40												
		L	22 51 53												
		L(NS)	23 18 10 to												
		F	23 24 00												
		F	0 58 15												
	26th	Small quake registered early morning, no cut-off; more marked on E/W component.													
2498.	26th (Milne)	L	3 45 36												
		L	4 09 42 to 4 12 42												

Mm.  
0.1

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FROM..... To.....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A N	A E	A Z	
					μ	μ	μ	
2499	1923. MAY 26th  (Milne)	L	9 36 12					
		L	10 01 12					
		F	10 07 54			mm 0.05		
2500	28th  (Milne)	L	2 36 48					
		L	2 51 00					
		L	2 53 48					
		L	3 01 42					
		eL	3 08 06			mm. 0.3		
		F	3 11 18					
2501	30th	iP?	78 44 15					
		P or S	8 48 32					
		L	8 52 45	17				
		L	8 57 15					
		L	9 00 30		12			
		L	9 06 00 to					Micros precede 8h 48m 32s.
		F	9 07 45	15				
		F	9 56 00					
		P?	78 48 34					
		S?	8 58 08	8				Minute micros previous to 8h 48m 34s.
		L	9 00 22					
		L	9 08 02	15		8		
F	Micros							
2502	30th	e	18 14 52					
		e	18 18 55					
		L	18 31 15 to					Amplitude of e-W <sup>u</sup> 14, Period 23 secs.
		M	18 34 00					
		F	18 32 56 Micros.	17	20			
2503	31st.	L	6 49 00					
		L	6 58 08					
		F	7 11 15					Slow waves of disturbance.
2504	31st.	O	22 05 47					
		P	22 12 37	5				
		PR1	22 17 10					
		S	22 18 02					3620
		eL	22 21 45					
		L	22 22 00 to	15 to				
		F	22 30 00 23 16 00	19		10		Uniform waves 22h 37m 30s

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FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>	
					μ	μ	μ	
			h. m s.	s-				km
	1923 JUNE							
2508	2nd.	L? L	13 38 45 13 46 33					Doubtful as to being seismic.
2509.	2nd.	L F	23 49 11 0 31 15					
2510	3rd.	eL	12 34 45 Marked micros all morning					<del>XXXXXXXXXXXXXX</del> E-W component.
2511	4th.	L L L	21 23 08 21 32 52 22 58 23					Only shown on E/W component.
2512	5th.	L F	6 38 08 Micros					
2513	6th	L L L L F	18 00 41 18 23 37 18 35 15 to 18 57 00 Micros					N-S component phases not marked, slow waves of disturbance, small amplitude.
2514.	6th	e L F	23 10 38 23 15 15 to 23 16 37 23 55 08					Uniform waves 15h 15m to 16h37m
2515	10th	L F	1 48 11 2 01 00					Very small.
2516.	10th	eL F	19 10 23 21 11 23					Slow waves.
2517.	11th	L L	11 35 06 11 38 30					
2518	18th	P S i i i L? L F	8 34 59 8 40 44 8 42 02 8 49 17 8 54 15 8 50 08 9 00 02 10 53 00	30?	42			

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NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A N	A E	A Z	
					μ	μ	μ	
	1923 JUNE							
	18th	i	8 30 45	5				
		i	8 33 33	3				
		i	8 34 08	5				
		P	8 34 41	5				
		P	8 35 08	8				
		S	8 40 36					
		i	8 40 41					
		i	8 41 25					
		i	8 41 30					
		eL	8 50 00					
		eL	9 06 15	25		277		
		F	11 06 00					
2519	18th	L	21 26 08					May not be seismic
		L	21 29 00					
2520	19th	O	22 43 35					
		iP	22 51 51					
		S	22 58 23					
		L?	23 05 26					
		M	23 11 13	13	36		4820	
		F	0 49 00					
		P	22 51 50					Coupling thrown off, local cause at 22h 58m 45s.
		S?	22 58 30					
2521	22nd.	e	4 02 15					
		e	4 02 42					
		eL	4 05 15					
		F	4 28 00					Small amplitude.
2522.	22nd.	e?	? 7 04 30					
		S	7 11 40					5520
			7 11 50					5700
		L	7 20 00	15				
		M	7 51 25	23		62		
		F	7 51 48					
		F	9 52 00					
		P	7 04 05					
		i	7 10 02					
		S	7 11 10					
		e	7 12 30					
		L	7 14 00					
		eL	7 20 15					
		M	8 00 15					
		M	8 00 32	17	47		5430	
		F	9 49 00					

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FROM..... To.....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A <sub>N</sub> μ	A <sub>E</sub> μ	A <sub>Z</sub> μ	
2523	June. 22nd.	eL	7 21 24 15	18 to 23				Small amplitude.
		eL	21 44 37					
			22 10 00					
		F	23 16 00					
2524	25th	L	22 54 22					E-W component. Small micros going on.
		eL	23 10 10					
		i	23 12 45					
		L	23 14 00					
		F	? 23 22 00					
2525	30th	i	0 29 39					E-W component.
		eL	0 32 15					
		F	? 0 47 00					

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FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
			h. m s.	s-	μ	μ	μ	km	
2526	1923. July. 1st.	e	7-49-03	15					
		e	7-50-32						
		L	8-54-15						
			to						
		F	9-12 9-24					E minute vibrations.	
		L	9-03-14 to 9-12	15					
2527	2nd.	L	2 51 00						
		L	3 24 10						
		L	3 30 00						
		L	3 48 08						
		F	4 46 15						
			eL						2 51 12
			L						3 00 30
			eL						3 30 34
			L						3 36 00
			F						4 24 00
2528	2nd. EW	L	16 56 52 to 17 10 00					Slow waves not recorded on NS component.	
2529.	4th EW	e	5 44 00	8					
		L	5 47 05	13					
		F	6 06 00						
	NS	P	5 37 41	4?					
		i	5 44 07 14	8					
		L	5 52 08	12					
		F	6 09 00					Small amplitude	
2530	4th EW	e	8 29 23	8					
		e	8 35 30	15					
		eL	8 39 00						
		F	9 56 00						
	NS	e	8 29 20	15					
		i	8 29 23						
		e	8 35 09						
		L	8 44 15						
		i	8 58 08						
		L	9 16 00						
		to	8						
		F	9 19 52 10 01 15	13				small amplitude	

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					<sup>A</sup> <sub>N</sub>	<sup>A</sup> <sub>E</sub>	<sup>A</sup> <sub>Z</sub>		
JULY (continued)									
			h. m s.	s-	μ	μ	μ	km	
2531	4th	i	17 08 52	11					
		i	17 09 49						
		F	?						
	NS	i	17 08 52	11					
		i	17 09 51						
		F	? 17 14 00						
2532	4th	L	23 51 00	17					
		eL	23 57 31 to						
			0 06 32						
		F	0 25 30						
NS component barely affected.									
2533	5th	L	16 06 00 to					Doubtful as to being seismic	
			16 26 00						
2534	6th	L	6 04 53					Slow waves.	
		F	6 16 00						
		Nothing on NS component.							
2535	7th	e	6 25 34					Minute vibrations 6 30 41 to 6 34 00 Small amp.	
		e	6 28 41						
		i	6 29 33						
		L	6 38 30						
		F	7 05 00						
	η.	e	6 28 26						
		i	6 29 20						
		Sharp vibs. 6 30 to 6 34 with a period of 8 secs.							
		F	6 54 00						
2536	7th	e	13 38 15					Slow waves up to 13h 48m when paper was taken off.	
	η.	e	13 38 27						
2537	10th	e	0 30 45					Slow waves.	
		F	0 36 24						
Nothing on NS component.									

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
			h. m s.	s-	μ	μ	μ	km	
July (continued)									
2538	10th	P	Not recorded						
		S	0 50 07	11					
		L	1 02 45						
		W	L	1 24 45	19				Small amp.
			F	3 06 15					
	N	P	0 40 42	6					
		S	0 50 07	12					
		L	0 59 15						
		L	1 02 30					8110 Km. Small amp.	
		F	1 20 41	15					
	F	? 2 44 00							
2539	10th	e	5 48 40					Very small, may not be seismic	
		F	5 48 50						
	N	e	5 48 30						
		F	5 48 45						
2540	12th	e	3 34 23	5					
		i	3 40 45						
		W	S	3 43 44	9				
			e	3 50 00	15				
		L	3 54 22						
		L	4 05 37						
	eL	L	4 06 49	38		28			
		L	4 11 00	to					
	N	F	4 15 30	22					
			6 12 00						
		e	3 42 02						
		e	3 49 49						
L		4 02 26	38						
F		4 10 38	23	19					
	F	6 12 00							
2541	12th	i	9 42 00					Uniform waves 10h 09m 37s to 10 14 00 Small amp.	
		e	9 48 04						
		W	L	10 06 53					
			L	10 09 37	to				
			F	10 15 30					
			F	? 11 14 00					
Slight undulatory movements on NS component.									



# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km
					A N μ	A E μ	A Z μ	
2542	July (continued)							
	13th	eP	11 27 28					
		PR1	11 31 33					
		S	11 38 00	8				
			11 38 06					
		L	?11 58 00	23				
			12 00 38					
		L	12 10 00 to					
		L	12 14 45					
		L	12 16 45					
			to					
	M1	12 21 15	18					
	M2	12 18 00		55				
	M3	12 18 17						
	F	12 18 34						
	13th	W	P	?11 27 34				
			e	11 30 17				
			PR1	11 31 35				
			S	11 38 01	8			
			L	11 58 00	15			
			L	12 02 08	43			
			L	12 04 30 to	34			
				12 06 15				
			M1	12 09 40	22			
			M2	12 10 55				
M3			12 12 08	22				
M4			12 13 26	22				
M5			12 13 47	22		45		
F			-				9340	
								9440 Well defined record Uniform waves 12h 16m 45s to 12 19 00
2543	14th	W	e	23 03 30				
			L	0 44 45 to				
			F	? 1 12 00				
	14th	N	e	0 45 30				
			L	0 45 52 to				
			F	1 05 00				
			1 37 00				No marked feature	
2544	15th	W	e	3 58 37				
			F	4 00 00				

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km	
					A <sub>N</sub> μ	A <sub>E</sub> μ	A <sub>Z</sub> μ		
July (continued)									
2545	16th	e	13 58 22	11 37	20			Marked uniform waves from 14h38m to 15h 04m, gradually decreasing, 19 seconds period	
		i	14 04 07						
		L or S	14 08 00						
		L	14 14 53						
		eL	14 33 30						
		M	?						
		F	16 28						
	N	e	14 06 20	15 to 19 to	9				Uniform waves of small amplitude.
		i	14 08 10						
		S?	14 08 10						
		i or S	14 15 02						
		L	14 30 22						
		L	14 46 00						
		F	14 50 38						
F	15 40 00								
2546	17th	i	1 16 41					Minute ripples at 1h 16m 41s.  Very irregular waves, small amp.	
		i	1 20 08						
		L?	1 23 05						
		F	2 08 00						
		F	2 08 00						
	N	e	1 19 02						
		i	1 25 30						
		i	1 28 16						
		F	1 58 00						
		F	1 58 00						
2547	18th	P	1 13 06	25 to 30 to				3980. Uniform waves from 1h 24m 38s. small amp.	
		PR	1 14 28						
		S	1 18 52						
		L	1 22 19						
		eL	1 24 38						
		eL	1 31 52						
		F	2 02 00						
	N	PR1	1 14 28						P not recorded.
		eS	1 18 53						
		eL	1 24 25						
		eL	1 25 12						
		eL	1 25 12						
		F	1 40 00						
2548	18th	P	6 09 22	23 to 30 to				3980. Small amp. Characteristics very similar to #2547, but somewhat larger amp.	
		PR1	6 10 45						
		Si	6 15 08						
		L	6 20 00						
		L	6 28 53						
		F	7 04 00						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
					μ	μ	μ	
	July (continued)		h.   m   s.	s-				km
	18th	P	6 09 19					
		PRI	6 10 45					
		iS	6 15 10	8				
	N	L	6 18 37					
		eL	6 20 30					
		L	6 22 00	15				
		F	6 44 00					
2549.	20th	i	5 07 38					
	W	eL	5 17 24					
		F	5 46 00					
		e	5 07 45					
	N	L	5 17 30					
		L	5 41 00					Small amp. Very gradual movement 5h17m24
2550	20th	L	15 24 00					
	W	eL	15 36 36	30				
		L	15 42 45					
		L	15 45 45					
		F	<i>Changing paper</i>					
		e	15 23 38					
		eL	15 32 30	37				
	N	L	15 34 15	18				
		F	<i>Changing paper.</i>					
2551.	21st.	L	7 02 30					
	W	eL	7 18 15					
		F	7 36 00					
			Nothing on NS component.					
2552.	21st.	L	8 01 32					
	W	F	8 38 00					
			May not be seismic.					
2553	22nd.	P	14 28 47					
		e	14 37 30					
	W	iS	14 37 34	10				
		SR	14 45 00					
		i	14 45 08					
		L	14 48 47					
		iL	14 49 52					
		L	14 50 50	30				
		M	14 59 17	17				
		F	?18 18 00			40		
			7360 Well defined waves from 14h 50 48s to 15h 24m.					

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
July (continued)			h. m s.	s-	μ	μ	μ	km	
<del>2554</del>	22nd	eP iS	14 28 41 14 37 36					7510	
	N	SRL L L M F	14 45 14 14 48 46 14 50 45 15 02 07 17 58 00	15	25				
2554.	23rd	e	7 40 08						Minute vibra- tions at begining
		e	7 40 50						
		S	7 41 48						
		i	7 46 28						
		i	7 46 58		7?				
		L	7 47 10	to	13				
			M	7 56 52	8 to 11		40	Well defined 7h 49m to 7h 56m	
			F	7 49 36	7				
				9 30 00					
		N	S	7 41 48					P not discernable
			i	7 46 29					
			L	7 46 45					
	L		7 47 00	to	5 to				
				7 51 00	15				
			M	7 47 12		173			
		F	8 29 00				Well defined.		
2555.	25th.	e	2 04 25					Undulatory, may not be seismic.	
		e	2 16 00						
		F	2 44 45						
			Nothing on NS component.						
2556.	26th.	e	3 20 00					Small amp.	
		L	3 26 23	to	15 to				
			3 38 00		22				
		F	3 58 00						
			NS component very slightly affected.						
2557	26th	e	10 10 30					Series of concordent waves of small amp.	
		e	10 32 38						
		eL	10 52 15	to	15				
			11 07 00						
		F	?11 58 00						
			NS component barely affected.						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
July (continued)			h. m s.	s-	μ	μ	μ	km	
2558	27th	e	2 12 00					Undulatory	
		L	2 14 45						
		L	2 22 53						
		W	2 28 45						
		component F	3 42 00						
	N	E	2 16 23						
		e	2 32 33						
2559	28th	e	18 36 28				May not be seismic.		
	Both components		to 18 28 00						
2560	31st.	i	5 51 26					Small amp.  L waves difficult to interpret.	
		i	5 53 39						
		i	5 54 32						
		W	5 54 40						
		e	5 58 37						
		e	5 59 15						
		L?	? 6 01 17						
		F	6 24 00						
2561	31st.	L	16 04 00		Small uniform L waves going on when paper was put on at 15h 44m to 16h 03m 38s. Period 10 to 15 s.				
		F	-						
	N	i	16 04 44						
		L	16 08 24						
		F	-						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A N μ	A E μ	A Z μ	
	AUGUST.							
2562	1st. W.	L	5 24 22 to 6 29 00					Undulatory
2563	1st. W	i i L F	8 37 51 8 37 54 8 54 00 9 10 00	3 8				Sharp vibs. up to 8h 39m
	N	i	8 37 51					Not so decided as on E-W.
2564	2nd. W	eL L F	9 45 06 9 47 07 9 54 00					Small amplitude.
2565	4th W	L	17 13 00 to 17 44 00					Undulatory.
2566.	8th. W.	L	9 04 00 to 9 18 00					Slightly undulatory.
2567	8th. W	L	12 03 00					Undulatory, only marked on E/W compon.
2568.	8th. W	iP S eL L M i i eL F	12 03 20 12 13 51 12 15 45 12 16 15 12 21 32 12 36 16 12 46 08 13 48 00	17 23		8		3720 km.
	N	0 iP eS iS eL L M i F	12 01 24 12 08 20 12 13 48 12 13 53 12 17 11 12 18 20 12 22 15 12 36 15 13 34 00	17 8	11			3680 Km.

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
			h.   m   s.	s-	μ	μ	μ	km
AUGUST (CONTINUED)								
2569	10th W	eL	3 02 23					Undulatory.
		L	3 16 08					
		eL	3 45 22					
		F	? 5 21 00					
NS component not affected.								
2570	10th W	L	16 46 30					Undulatory.
		eL	16 56 00					
		F	Micros.					
Nothing on NS component.								
2571	10th W	L	23 12 45					Heavy micros.
		F	23 48?					
	N	L	23 12 45					Micros going on.
		L	23 16 00					
		F	23 44 00					
2572	11th W	e	1 26 23					Micros, slow waves.
		i	1 33 08					
		L	1 52 15					
		F	3 12 00					
	N	i	1 17 08					Small amplitude.
		i	1 33 08					
2573	12th W	e	7 07 15					
		F	7 24 00					
	N	e	7 10 37					
		L	7 16 00					
2574	12th W	e	10 46 08					Slow waves.
		L	11 07 38					
		F	12 01 00					
	N	L	10 58 30					
		L	11 06 00					
		L	11 08 23 to					
		F	11 15 08 11 48 00			3		
2575	12th N	e	17 43 48					slight traces
		F	17 58 00					
Local affects on EW component.								

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km
					A N μ	A E μ	A Z μ	
AUGUST (continued)								
2576	16th	i	20 44 41	23				
		L	21 03 08					
		W	21 06 52 to					
			21 13 00					
		F	Micros.					
	N	i	20 44 34					
		L	21 02 50					
		L	21 10 20					
		L	21 11 00					
		L	21 16 to					
		21 20 00						
		F	Micros.					
2577.	17th	e	1 24 20	7				
		i	1 25 08					
		W	1 25 23					
		L	1 44 53					
		F	?2 20 00					
	N	e	1 24 05					
		i	1 25 15					
		L	1 47 00					
		F	?2 21 00					
2578.	17th.	e	4 30 45					
		W	4 52 00					
	N	L	4 34 22					
		F	4 52 00					
2579.	17th	L	12 14 45					Very small amp. L 12 38 45 <i>Micros</i>
		W	12 39 15					
		Nothing on NS component.						
2580	17th	Sinusoidal		23				
		L	13 12 to					
			13 17 23					
			again					
		W	13 18 53					
		to						
		13 37 00						
		F	Paper being changed.					
	N	L	12 02 00					
		L	12 12 to					
		12 27 45						
		?13 54 00						



# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km	
					A N μ	A E μ	A Z μ		
AUGUST (continued)									
2581.	18th	L	22 00 00					May not be seismic	
		L	22 36 05						
			to						
			22 37 37						
		F	23 08 45						
		N	L	22 36 00 22 47 00					
2582.	19th	eL	13 18 30					Early phases masked by local causes.	
		L	13 26 00	23					
			to						
			13 32 20						
			and						
			13 38 18 to	18					
			13 41 00						
			F	-					
			e	12 51 15					
			eL	13 22 49	25 to				
N		L	13 28 00	30	6		Reported from Persia		
		to	13 38 00						
		F	14 08 00						
2583.	20th	Local causes masked any eq. movements on EW component.							
N		L	7 19 12 37				Very small amp.		
		F	19 27 00						
2584.	23rd.	P	5 29 16				S indefinitely recorded		
		eS	5 35 45						
		L	5 42 43						
		W	L	5 46 00	15	5			
			F	6 44 00					
			iP	5 29 11					
			i	5 29 20					
			i	5 33 25					
			eS	5 35 45					
			L	5 43 04					
			L	5 46 37	18			6	
			L	5 50 00 to					
				5 54 00	10				
	F	6 40 00							

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
2585	28th	O	h. m. s. 23 15 20						
		1P	23 21 30	3 to 8					
		eS 1	23 26 23)	8 to 10					
			23 26 30)						
		L	23 30 25						
		1L	23 31 30						
		1L	23 31 35	7		232	Large vibrations 3140 km.		
		M	23 31 51 to	8 to 10					
			23 32 00	10					
		L	23 49 15	15					
		F	2 53 00						
	N	28th	O	23 15 23					
			1P	23 21 33					A marked, steady trending N, begin- ing at 23h 21m 21 lasting 8 seconds.  Rapid vibrations during L waves.  3140 km. Period at Max. difficult to get.
			1S 1	23 26 26)	10				
				23 26 39)	8				
			1L	23 30 30	11				
			L	23 31 08	15				
			M1	23 32 19	10	496			
			M2	23 32 44					
			M3	23 33 24					
	F	1 56 00							

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... SEPTEMBER 1st. ..... TO.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
			h. m s.	s-	μ	μ	μ	km	
2588	Sept. 1st.	O	2 58 37						
		eP	3 11 48	7 to 8					
		i	3 12 00						
		i	3 19 38						
		i	3 22 35						
		i	3 22 38						
		W	3 22 41						Destructive Japanese quake. 10,180.
		iS	3 22 54	8					
		i	3 22 59						
		i	3 23 06	19			113		Principal portion one mass of large vibrations.
		i	3 38 37	55					
		iL	3 43 13						
		M	3 56 18	17 to 20			800		
		eL	8 27 47	23					
		F	10 10 -						
2589	End.	O	2 58 40						
		eP	3 11 49	8					
		i	3 22 41						
		i	3 22 44	8					
		iS	3 22 53					Mass of rapid vibrations.	
		i	3 23 10						
		i	3 23 18						
		iL	3 47 01	38					
		M	4 00 22	18		422			
		L	4 16 01 to 4 18 16						
		iL	8 30 50						
		F	10 08 01						
		e	3 00 00	157					
		e	3 03 44	20					
		iS	3 10 30	15					
W	3 30 37								
M1	3 46 03	15			129		Marked disturbance.		
M2	3 46 19	20			365				
M3	3 46 40	20			405				
eL	4 46 24								
F	7 10 00								
N		e	3 00 00	15					
		i	3 03 44						
		iS	3 10 33	11					
		SRI	3 17 33	15					
		L	3 30 37						
		L	3 30 45	20				Series of smaller waves at 4h 00m 00s.	
		M	3 39 17						
		L	3 39 25	19		105			
		L	4 00 00	15					
		L	4 12 53						
F	7 04 00								

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Cl.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
					μ	μ	μ		
			h. m s.	s-				km	
2590	Sep. 2nd	e?	9 40 07						
		e	9 44 07						
		S	9 50 30	8					
		eL	10 09 15						
		W	L	10 16 00					
			Small uniform waves						
				10 24 00 to					
				10 33 00	15		13		
			F	12 10 00					
			e	9 44 00					P indefinite.
			IS	9 50 33					
			N	eL	10 09 06	8			
				L	10 24 00				
				P	12 02 00				
		2591	2nd.	P	22 48 07				
IS	22 56 09			15		48		P indefinitely marked.	
i	22 56 12			15		5			
	SR1			22 57 21					
W	SR2			22 57 40					
	i			22 57 45	10		56		6490
	i			22 58 53					
	i			23 01 20					
	eL			23 12 30					
	F			1 02 00					
	P			22 48 08					
	PR			22 48 46					
	e			22 55 43					
	N			e	22 56 03				
				IS	22 56 11	8			
		ISR1	22 57 39	8	17		6500		
		L	23 08 55						
		F	1 14 00						
2592	9th.	e	4 27 30						
		S	4 34 42					L waves not well defined, small amplitude.	
		L	4 40 00						
		F	5 00 -						
		N-S component not recording.							
2593	9th	i	22 30 42						
		i	22 38 53					P & S masked by micros.	
		eL	22 35 30						
		eL	22 56 13						
		W	L	23 02 00					
			M	23 05 06	23		71		
			F	0 58 00					

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME			PERIOD	Amplitude			DISTANCE
							A	A	A	
							N	E	Z	
			h.	m.	s.	s-	μ	μ	μ	km
	Sept. 9th	SP	22	23	07					Air currents previous to 22h 23m 07s.
		S	22	23	56	8				
		i	22	32	22					
		L	22	38	15	15 to				
	N	L	23	05	03	23				
		M1	23	10	34	23	52			
		M2	23	17	04	17	27			
		F	0	54	00					
2594	10th	e	9	55	32					
		eL	10	00	12					
	W	F	10	17	00					Small amplitude.
		e	9	54	19					
		eL	10	00	15					
	N	eL	10	02	12					Small amplitude.
		F	10	17	30					
2595	11th.	eL	9	28	15	15				
				to						
	W		9	32	00					Very small
		F	9	40						
		eL	9	29	50					
	N	F	9	37	00					
2596	12th	P	6	09	30					
		iSP	6	20	11	8				L waves poorly defined. Small amplitude.
	W	L?	6	44	12					
		L	6	50	37					
		F	7	30						
		i	6	12	08					
		e	6	19	39					
		i	6	19	42					
	N	i	6	20	10					There is no corresponding movement on EW component at 6h 19m 39s. which might be taken for S.
		i	6	27	00					
		i	6	27	15					
		F	6	26	00					
2597	16th	eL	17	40	15					
		L	17	46	00	20				
		M	17	46	19					P & S lost, changing paper.
				to						17
			17	46	59	19				
	W	L	17	58	34	to				
		F	18	09	00					
					?					

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>	
			h. m s.	s-	μ	μ	μ	km
	Sept. 16	L	17 38 23					
		L.	17 40 00	19				
			to	to				
	N		18 05 00	23				
		M	17 46 32	23	18			
		F	19 14 00					
2598	17th.	i	4 03 11					
	N	e	4 04 02					Small amplitude.
		F	4 16 00					
		E-W component, pronounced micros.						
2599	17th.	S?	7 40 53					P masked by micros.
		L	7 50 53 to	15 to				
			7 59 45	30				
	W	L	8 00 15					
		L	8 03 06					
		L	8 06 50	15		14		
		F	A.C.					
		P	7 32 55					7710
		e	7 33 16					
		S	7 42 50					
	N	eL	7 50 30	37				
		L	8 04 00 to					
			8 08 45	19	10			
		F	9 05 00					
2600	20th	e	9 33 08					Small amplitude.
	W	e	9 34 45					
		F	Micros.					
		L	9 32 38					
	N	i	9 34 37					
		F	Micros.					
2601	21st.	e?	20 24 35					Small amplitude.
		eL	20 54 23	19				
	N	F	Micros.					
		Micros on E-W component.						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
			h. m s.	s-	μ	μ	μ	km	
2602	Sept. 22nd	e	12 45 32						
		i	12 50 07	7					
		i	12 50 40	8					
		eL?	12 56 15	11				L waves not pronounced but of quick period.	
			to						
			12 59 00						
		eL	13 08 08						
		F	13 20 00						
				i	12 48 15				
				i	12 50 38	8			
				i	12 53 08				Minute and rapid vibrations 12h 50m 38s to 12h 58m.
				L	13 00 23				
				F	13 20 00				
			22nd.	Paper being changed at 15h 20m when other station recorded quake.					
2603	22nd.	P	21 05 11						
		i	21 11 43						
		S	21 12 25						
		eL	21 26 37	23					
		L	21 44 06	19 to 25					
				M	21 44 23			27	
				F	23 44				
				P	21 05 11				
				i	21 11 41				
				iS	21 12 28				
				eL	21 26 24				
				L	21 36 30	34			
				L	21 42 55	23			
		M	21 44 21)		29				
			21 44 45)						
		F	23 34 -						
2604	23rd.	e	4 03 08						
		L	4 04 53 to						
			4 07 23	15				Small amplitude.	
		F	4 24 00						
				L	4 03 00 to				
			4 05 00				Uniform small waves.		
		F	4 12 00						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>	
					μ	μ	μ	
			h. m s.	s-				km
2605	Sept. 23rd	e?	17 44 02					
		L	17 52 17					
		L	17 54 38	11				
			to					
			18 01 47					
			and again from					
	W		18 02 47	12		7		
			to					
			18 16 00					
		F	18 53 -					
		e	17 44 15					
		i	17 52 11					
		eL	17 52 25					
	N	L	17 54 00	11 to 15				
		i	18 08 38	11				Series of quick L waves.
		F	18 49 00					
2606	26th	i?	2 48 08					
		L	3 00 22	11 to 19				
			to					
			3 01 45					Small amplitude.
	W	L	3 06 00					
		L	3 08 14	15				
		F	3 28 00					
		i?	2 47 52					
		L	2 54 52					
	N	L	2 58 08					
		F	3 26 00					Undulatory L waves.
2607	26th	eS	8 47 32)					
			47 35)					
		L	8 54 49					
	W	L	9 13 08					
		L	9 16 43					
		M	9 20 25	18		19		
		F	Micros.					
		P	78 34 19)					
			8 35 06)					
		iS	8 47 35	12				
	N	L	8 48 21 to					Micros render P doubtful.
			8 49 52					
		L	9 16 30					
		L	9 26 57	15				Uniform waves began 9h 26m 57s.
		M	9 27 19		11			
		F	Micros.					



# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE		
					A N	A E	A Z			
			h. m s.	s-	μ	μ	μ	km		
2608	Sept. 27th	P?	7 26 21	5 to 7				Small amplitude.		
		i	7 37 30							
		S	7 38 40							
		e	7 40 45	15						
		e	8 11 15							
		L	8 19 00							
		L	8 29 00							
	W	i	8 40 08	17						
		L	8 46 19							
		F	Micros.							
		P?	7 26 15	15						
		S	7 38 38							
		e	7 40 45							
		L	7 42 00 to							
F?	7 45 15									
N	8 58 00									
2609	28th	e?	21 12 53	11 to 18				Marked small waves from 21h 17m 52s to 21h 21m 00s.		
		e?	21 14 50							
		e	21 17 52							
		L	21 21 00	19						
		M	21 21 20							
		W	L	21 29 45					18	
			eL	21 38 03						
	F		Micros.							
	e?		21 12 55	10						
	e?		21 14 49							
	eS?		21 18 03							
	L		21 25 50		19					
	M	21 26 48								
	N	F	? 21 55 -	11	Marked micros previous to 21h 18m on both components. M? 21 26 57.					
2610	30th.	O	1 19 20					4580 km. Very large L vibrations up to 1h 43m 15s, smaller & more uniform then, to 1h 56m with quick periods.		
		eP	1 27 19							
		i	1 27 22						8	
		i	1 32 27							
		i	1 32 31							
		W	i						1 33 14	13
			iS						1 33 38	
			i						1 33 51	
			iL						1 36 07	17
			M						1 40 39	
			iL						1 42 52	11
			iL						1 44 15	
		L	2 14 13						683	
		F	5 14 00							

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM ..... To .....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s.	Amplitude			DISTANCE km
					$\frac{A}{N}$ $\mu$	$\frac{A}{E}$ $\mu$	$\frac{A}{Z}$ $\mu$	
	Sept. 30th							
		O	0 19 14					
		P	1 27 17					
		i	1 32 29					
		i	1 32 39	17	70			
		S	1 33 39					
		1L	1 35 57					
	N	M	1 41 15	17	685			
		1L	1 46 00					
		1L	1 58 08					
		F	5 16 00					
							4630 Km. Large L vibrations to 1h 44m, smaller afterwards.	

JAMES YOUNG.

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
					μ	μ	μ	
			h. m s.	s-				km
2611	1923. OCTOBER. 1st.	1	78 55 30	25	15			Preceded by micros.
		1	8 58 53					
		e	9 03 36					
		W	9 11 42					
		L	9 12 38					
			Sinusoidal to					
			9 15 52					
		L	9 18 43					
		F	710 00 00					
		17	9 00 36					
		eL	9 12 20					
		N	Very slow waves to 9 17 00					
		eL	9 21 30					
		F	9 54 00					
2612	1st.	e	22 53 21	30	6			Marked micros going on. N-S component very little affected.
		e	23 04 26					
		1	23 05 40					
		L	23 18 23					
		W	eL 23 24 00					
		L	23 30 58					
		L	23 39 43					
			to					
			23 42 38					
		F	Micros.					
1	23 05 39							
N	L 23 30 55							
F	Micros.							
2613.	5th.	eL	1 35 30					N-S component very slightly affected.
		W	F 1 55 00					
2614.	7th.	P	3 51 00	20 to 25	108			Lines crowded .  S waves very irregular.  11,410) 11,830)
		PRI	3 52 11					
		1	3 53 10					
		e	4 00 15					
		S	4 02 57)					
		18	4 03 14)					
		1	4 14 00					
		L	4 27 38					
		L	4 29 41					
			Sinusoidal to					
			4 49 34					
M	4 38 47)							
	4 39 02)							
	4 49 52							

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>	
					μ	μ	μ	
	7th (continued)		h. m s.	s-				km
		P	3 50 55					
		PR1	3 52 15					
	N	i	4 01 15					
		S	4 02 52)	12				S waves difficult to interpret.
			4 03 16)					
		i	4 04 00	15				
			Sinusoidal to					
			4 05 00					
		L?	4 24 00	22				11,410)
		L	4 30 45	45				11,830)
		L	4 37 45					
			Sinusoidal to					
			5 04 00					
		M	4 46 17	20	56			
		F	7 14 00					
2615	7th	e	7 27 02					May not be seismic.
	N	e	7 40 03					
			Crowding of line on E-W component.					
2616.	8th	P	3 49 46					
		PR1	3 50 58					
		e	3 55 11					
	N	L	3 58 19 to					
			4 03 45					
		eL	4 04 00	15	6			
			to					
			4 09 43					
		F	4 23 00					
		e	3 55 15					
		e	3 57 50					
	W	L	3 58 08					Lines crowded.
		L	4 00 00	30	16			
			sinusoidal to					
			4 07 00	23				
		L	4 07 23	15				
		F	-					
2617.	10th	1P	7 19 17	7				
		PR1	7 21 05					
		S	7 25 46					Phases well defined.
		i	7 25 53					Six well defined
		1SRI	7 29 07					M.
		i	7 29 21	12				
		i	7 30 39					4760 Km.
	W	L	7 32 37	23				
			Sinusoidal					
		L	7 34 to					
			7 42	19				
			7 34 17	17	58			
			7 42 14	irregular.				
			9 28 00					

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
					μ	μ	μ	
			h. m s.	s-				km
	10th continued.							
	N	iP	7 19 15	8 to 10				Phases well defined, 4850 km.
		iPRI	7 21 08					
		iS	7 25 49	?12				
		L	7 32 26	19				
		L	7 33 38	to				
			7 45 50					
		M	7 38 55	12 to	46			
		L	7 46 00	13				
		F	9 18 00			Waves became smaller		
2618.		10th	eL	23 01 38				
	W	e	23 27 45					
	N	e	23 02 55				Undulatory.	
2619.	11th	e	12 57 08					
	W	L	13 03 25				Nothing definite.	
		L	13 08 30					
		L	13 31 34					
		F	?13 41					
	N	L	12 59 06				Very small amplitude	
		L	13 08 38					
		F	13 24 00					
2620	13th	iP	4 32 45					
		e	4 43 29				P & S masked by micros.	
		L	4 46 15					
	W	L	4 46 39	23				
			Uniform waves to					
			4 48 38	13 to				
		L	4 49 00	8				
		M	4 48 00	& 10	8			
		F	5 31 00					
	N	eP	4 40 55					
		e	4 45 30	9				
		L	4 46 32					
		iL	4 46 53				Micros masked early phases.	
			Uniform to	11				
			4 48 38					
		M	4 47 38	14	12			
		F	? 5 30 00					

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
			h. m s.	s-	μ	μ	μ	km	
October (continued)									
2621.	15th	1P?	8 01 41					No defined phases.	
		e?	8 07 09						
		e	8 13 45						
		L	8 28 00						
		W	L	8 44 52					
		eL	9 12 26						
			Undulatory to						
				10 03 00	19 to		6		
			F	10 22	23				
			N	1P	8 01 43				
		e	8 07 15						
		eL	8 24 53						
		Undulatory to		15 to					
			8 38 38	18					
		L	8 42 15	15	4				
		F	10 10						
2622	15th	L	720 45 00				Small amplitude.		
	W	L	20 53 41						
		F	21 02 -						
N-S component only a very slight record.									
2623.	17th	L	6 01 06	15			Small sinusoidal to 6 04 37 Micros.		
	W								
		F							
2624	18th.	L	22 13 36				Micros on E-W component.		
	N	F	Micros.						
2625	19th	L	23 02 08				E-W component, micros.		
	N		small sinusoidal waves to						
		F	23 06 38 Micros.						
2626	20th	L	18 32 34				E-W component, masked by micros.		
	N	L	18 43 40						
		F	Micros.						
2627.	21st.	i	19 16 48	5			Undulatory 19 18 15 to 11 19 18 49 19 20 53 19 27 00		
	W								
		L?	19 20 53						
		F	19 27 00						

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A N μ	A E μ	A Z μ	
	October (continued)							
N	21st.	i	19 16 49	5				Very small amplitude.
		i	19 17 07					
N		L?	19 20 40					
		F	19 25 00					
2628	26th	e	19 40 15					Irregular and very small amplitude.
	N	F	19 50 00					
	E-W component, micros.							
	26th. Power off from 23h 07m 15s to 12h 51m on the 27th.							

# TORONTO

## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM.. November 1st. ..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
			h. m s.	s-	μ	μ	μ	km
2629.	1925. November. 1st.	e	20 10 41					
		i	20 11 21					
		e	20 12 45					
		eL	20 14 45					
		L	20 15 57					
		M	20 16 06)	10			16	
		W	20 16 11)					
		i	20 18 37	8				
		L	20 19 23	13				
		F	21 02 00					
		S	20 12 41					
		e	20 15 15					
		eL	20 15 38					
		N	L	20 16 00	10			
				to				
		20 18 23						
	M	20 16 00)						
		20 16 10)		9				
	L	20 19 15						
	F	Micros.						
2630	2nd.	eP	21 27 41					
		PRL	21 34 13					
		es	21 38 30					
		i	21 38 35					
		SR	21 44 38					
		iSR	21 46 30					
		eL	22 02 29					
		W	L	22 07 00	26 to			9800
				to				
				22 14 10	30			
			L	22 16 13	15			
			uniform	to	to			
				22 23 15	19		84	
			M	22 19 04	17			
			L	22 23 39				
			F	1 30 00				
			P	21 27 45				
			S	21 38 30				
			i	21 45 08				
			L	21 59 00	745			
N	eL	22 03 00	slow					
	L	22 07 15	to					
	uniform	22 20 53						
	M1	22 09 55		30				
	M2	22 10 17	23					
	L	22 23 30	18			9720		
	L	22 43 15						
	F	23 56	18					



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## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
2631.	NOVEMBER	continued.						
			h. m s.	s-	μ	μ	μ	km
	3rd.	eL	3 29 24					
	W	L	3 38 10					Small amplitude.
			N-S component, nothing.					
2632.	3rd.	L	5 06 28					
	W	L	5 16 30					Small slow waves.
		F	5 34 00					
			N-S component, nothing.					
2633.	3rd.	e	5 44 30					
		e	5 48 08					
			Sinusoidal from					
			5 49 03	22				
	W		to	to				
			6 03 00	25		9		
		L	6 07 34	20				
		F	6 36 00					
			N-S component not affected.					
2634	3rd.	O	8 37 21					
		eP	8 43 07					
		iS	8 47 42					
		i	8 47 52	15		24		Larger amplitude
	W	iSR	8 48 41					at beginning than
		eL	8 50 06					in princppal part.
		L	8 50 56	21				
			Sinusoidal to					
			8 53 15					
			and again from					
			8 55 47 to					2890
			9 29 15					
		M1	8 55 58)					
			8 56 08)	15		23		
		M2	8 56 13					
		F	?10 52					
		iP	8 43 09	3to8	7			P & S sharp and
		i	8 47 30					well defined.
		iS	8 47 43	6	7			
	N	eL	8 51 41					
		L	8 56 36	12				
		M1	8 58 15	10				2880 km.
		M2	8 59 38	10	9			
		F	10 35 00					

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## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE		
					A N	A E	A Z			
			h. m s.	s-	μ	μ	μ	km		
November continued.										
2635.	5fd	eL	16 38 43	9						
		e?	16 39 52							
		e	16 44 10							
		e	16 45 10							
		e	16 56 15							
		W	eL	17 00 32					23	
			L	17 04 38						
			L	17 15 11						
			M1	17 19 38						
			M2	17 20 00						
			F	Micros.					22	27
		N	i	16 44 10					26	
			L	17 15 38						
			L	17 24 53						
			F	?17 46 00						
2636.	4th.	P	0 23 56	8 to 10						
		e	0 24 58	15						
		PR	0 30 10	15						
		i	0 31 35							
		eS	0 34 46							
		W	iSR1	0 41 28					19	
			SR	0 42 13						
			L	0 54 52						
			L	uniform waves began 0 57 51						30
			M	1 05 24)						26
			1 05 51)							
		N	L	1 25 53					17	
			F	Micros.					53	
			P	0 23 53						
			e	0 34 30						
eS	0 34 50									
L	0 54 15									
L	1 03 00		28							
	Sinusoidal to		25							
	1 09 00									
	M1		1 05 11							
	M2	1 05 38	27							
	F	2 12 00								
2637.	4th. W	eL	12 54 53							
		F	Micros.							
Nothing on N-S component.										

Uniform waves, micros going on, may not be seismic.

Small amplitude micros going on.

Micros going on.

P doubtful owing to micros.

Small amplitude.

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LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A N	A E	A Z		
					μ	μ	μ		
			h. m s.	s-				km	
	November (continued)								
2638.	4th.	e	20 32 36						
		L	21 00 30						
	W	L	21 02 30	30					
			to						
			21 17 38	25 to	12			Micros going on.	
			and from	15					
			21 18 38 to						
			21 23	17					
		F	23 59						
			N-S component, very little affected.						
2639.	5th	e	2 22 15						
	W	eL	2 24 38	23					
		F	? 2 34						
			Nothing on N-S component.						
2640.	5th	e	14 36 30						
		eL	14 38 38	30					
	W	L	14 40 00	23	5				
		F	14 52 00						
		L	14 42 23					Very little affected.	
	N	F	14 58 00						
2641.	5th	O	21 29 17						
		P?	? 21 42 08					P poorly defined.	
		iS	21 52 56					9780 km.	
		e	21 53 43						
		eL	22 11 32	22					
	W	L	22 17 25						
		M1	22 19 43	33		94			
			22 20 08						
		M2	22 28 15	23		50			
		L	23 13 08	15					
		F	1 02 00						
		P?	21 42 08					P, ill defined.	
		iS	21 52 55						
	N	L	21 14 25						
			sinusoidal waves						
			21 24 15	30					
			to 21 28 45					9760	
			again						
			21 30 00	20 to					
			to 21 37 23	23					
		M1	21 27 12	23	57				
		M2	21 27 33	23	57				
		F	1 00 00						

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LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km	
					A N	A E	A Z		
					μ	μ	μ		
November (continued)									
2642.	6th	e	17 37 50	8				Small amplitude.	
		eL	17 49 38						
		W	F		19 24 00				
	N	e	17 37 52						
		i	17 38 10						
		L	18 02 15						
		F	18 30 00						
2643.	6th.	L	20 11 30	23				Small amplitude	
		W	L		20 19 08				
			F		21 10 00				
	N	eL	20 16 40						
		L	20 18 15						
			sinusoidal						
			20 24 45						
			to	20 27 15	15	4			
			F	21 07 00					
	2644.	8th.	P	? 0 08 35	11				
iS			0 13 00						
i			0 15 17	8					
L			0 16 00						
W			M1	0 15 21					
			M2	0 15 32			17		
		F	Masked by local causes.						
N		e	0 10 39						
		e	0 12 18						
		i	0 12 47						
		iS	0 13 04						
		L	0 14 43	8	11				
		M	0 13 23	?10	17				
		M2	0 15 00	8	12				
	F	1 06 00							
2645.	9th	P	Micros.	15					
		eS	3 32 08						
		W	e		3 34 15				
			L		3 40 35				
			L		3 42 00				
			M		3 42 30		9		
			F		4 50 00				
N-S component hardly affected.									

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LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE	
					A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
					μ	μ	μ		
			h. m s.	s-				km	
	November (continued)								
2646.	10th	e	3 14 15	12				May not be seismic	
			Nothing on N-S component.						
2647.	12th	e	? 12 00 26					Faint at 12 01 00 on bands.	
		e	12 08 21						
		iS	12 08 29						
		SR	12 10 30						
	W	eL	12 21 23						
		L	12 24 12	15					
		M	12 27 00			6			
		F	13 14 00						
			N-S component, barely affected.						
2648.	16th	eS	4 28 28					Micros mask P	
		i	4 32 20						
		L	4 32 30	11 to 15					
		iL	4 34 14						
			sinusoidal						
			4 34 47 to						
	W		4 36 00	14					
		M1	4 34 51						
		M2	4 35 04	13		50			
		iL	4 36 45						
		iL	4 37 30						
		F	5 30						
		P	Micros.						
		S	4 28 15						
		L	4 33 30						
	N	iL	4 34 30						
		M1	4 34 49						
		M2	4 35 02						
		M3	4 35 15	11	16				
		F	Micros.						
2649.	16th.	L	7 26 33	13				Micros going on. Very small amplitude.	
		L	7 26 49	15	5				
		L	7 28 30						
	W	i	7 29 17	8					
		F	7 40						
		L	7 26 45						
	N	i	7 30 35						
		F	? 7 34						

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LATITUDE, 43° 40' 0.8" N LONGITUDE, 5h 17m 35.6s W HEIGHT, 373 feet above sea level SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE						
					A N	A E	A Z							
			h. m s.	s-	μ	μ	μ	km						
November continued.														
2650	17th	eP	3 03 36	18										
		eS	3 11 55)											
		iS	3 11 57)											
		eL	3 22 35											
		M	3 30 10											
		M	3 32 00											
	F	5 16 00												
	N	iP	3 03 33											
		S	3 11 49)											
		eS	3 12 09)											
		iSRI	3 13 23											
		eL	3 22 30											
		i	3 28 20											
		L	Sinusoidal 3 30 23						15 to					
L		3 34 53	20											
L	3 35 45	23												
L	3 42 26	15												
F	4 42													
2651.	18th	L	22 06 30	23				Early phases masked by micros.						
		L	22 22 45											
		L	22 34 15											
		L	22 34 43											
		F	Micros.											
	N	L	22 52 49											
		L	22 41 00											
		F	22 52 00											
		Slow waves, small amplitude.												
2652.	19th.	L	9 12 15					Strong micros prevailing.						
		L	9 18 45											
		F	Micros.											
N-S component, nothing discernable, small micros going on.														
2653.	23rd.	L	3 27 23					Nothing marked.						
		F	3 40 00											
N-S component, nothing.														
2654.	25th.	L	17 44 48	30				Slow waves.						
		eL	17 57 38											
		L	18 00 19											
	Continuous slow waves upt to													
	F	?18 53 00												
	Small amplitude.													
N		L	18 06 19	18				Preceded by marked micros.						
		L	18 15 00	18										
		F	18 20 00											

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LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					A N	A E	A Z	
			h. m s.	s-	μ	μ	μ	km
November continued.								
2655.	26th	e	13 28 23	19				Micros going on. Undulatory, small amplitude.
		L	13 35 08					
		W	13 46 56					
		L	14 03 35					
		F	14 40					
	N	L	13 56 52					
		L	13 40 20					
		L	14 06 38					
F		14 12						
2656.	26th	e	16 28 47	15				Micros going on. Small amplitude.
		eL	16 31 55					
		F	Micros.					
	N	L	16 33 56	15				Very small amp.
		L	16 36 15					
			Uniform waves to					
			16 38 45					
			F					
2657.	28th	L	0 42 15	15				Small amplitude.
		L	0 49 15					
	W	L	0 51 36					
		F	Micros.					
		N-S component, Micros going on, but does not show any eq. effect.						

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LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m s.	PERIOD s-	Amplitude			DISTANCE km
					A N μ	A E μ	A Z μ	
	1923. December.							
2657	2nd. W	e L F	15 36 15 15 37 53 micros.	23				Sinusoidal, Small amplitude to 15 41 08
			N-S component not effected.					
2658.	3rd. W	L L F	8 57 15 9 00 23 Micros.					
			N-S component not effected.					
2659.	5th. N	e L F	7 59 10 8 02 49 Micros.					Small amplitude.
			E-W component, masked by wind effect.					
2660.	5th W	L i L i L	21 22 00 21 27 23 21 31 00 21 35 00 21 37 26	23 15				P & S lost, wind effecting boom.  Japan.
			Sinusoidal from 21 39 56 to 21 41 25    15					
		F	Wind effect on boom.					
		P eS i L	Micros. 21 17 38) 21 17 47) 21 31 12	22				
	N		Sinusoidal to 21 34 30    13					
		L i F	21 40 30 22 02 38 Micros.	15 15				
2661.	5th N	e e e e F	23 48 30 23 56 32 23 57 00 0 54 53 1 11 41 ? 1 28 00					Preceded by micros Irregular waves.
			E-W component, effected by winds and micros.					
2662.	7th W	e e F	16 31 58 16 34 15 Micros.					Small amplitude.



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Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE
					<sup>A</sup> <sub>N</sub>	<sup>A</sup> <sub>E</sub>	<sup>A</sup> <sub>Z</sub>	
			h. m s.	s-	μ	μ	μ	km
December continued.								
2663.	7th.	e	16 30 23					small amplitude.
	N	e	16 32 13					
		F	Micros.					
	11th.	eL	6 11 05	23				Small amplitude
		L	6 14 38	23				
		L	Uniform waves					
			to 6 18 00					
			again					
	W		6 22 08	23				
			to 6 26 15					
	L	6 31 36						
	F	Micros.						
	N.	e	6 10 00				Very small amp.	
		L	6 12 26 to					
			6 18 00					
		L	6 21 00					
		F	Micros.					
2664.	12th	L	11 21 15				Slow waves doubtful as to being seismic.	
		L	11 21 37					
	N.	L	11 28 30					
		F	11 40					
	12th	L	11 31 08				Micros and wind affect mask .	
W	F							
2665.	13th	e	17 09 52				7	
		L	17 10 08					
			Sinusoidal	17 to				
	W		to 17 13 33	15				
		L	17 14 15	Irregular				
		F	Micros.					
		L	17 10	19				
		L	17 10 32	13				
	N		Sinusoidal to					
			17 13 15					
	M	17 10 40		7				
	F	17 29						
14th, Power off, fuse blown out, no record. <i>in morning</i>								
2666	15th.	L?	12 50 40				Micros and wind effect, mask move- ments.	
	W	L	12 51 57	Irregular,				
		F	Micros.					

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Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME h. m. s.	PERIOD s-	Amplitude			DISTANCE km
					A <sub>N</sub> μ	A <sub>E</sub> μ	A <sub>Z</sub> μ	
	December continued.							
	15th	i L	12 48 40 12 50 15					
	N		Small uniform waves to 12 53 Micros.	10				
		F						
2667.	16th	e L F	7 51 08 7 58 00					
	W		Micros.	Irregular,				Small amplitude.
		e i L F	7 45 15 7 58 23 8 02 15 8 27 00					
	N							Micros render readings doubtful.
2668.	22nd.	P	?10 04 51)					
			10 05 23)					
	W	iS eL i i L L L	10 09 43 10 12 23 10 13 24 10 16 28 10 17 41 10 17 57 10 20 51 to	5 to 8 15 8 14 30				
		M1 M2 L F	10 21 11 10 21 28 10 22 15 11 24 00			23		
		P? S e L L	10 04 47 10 09 40 10 16 14 10 16 30 10 16 51	5 25				
	N		Uniform waves 10 20 15 to 10 22 38	19 19				
		M1 M2 L F	10 21 24 10 21 41 10 23 38 11 24 00	23 15	21			
								3120 km.  Eq. reported from Colombia.  3110 km. Micros render P doubtful.

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## EARTHQUAKE STATION, METEOROLOGICAL SERVICE OF CANADA.

LATITUDE, 43° 40' 0.8" N    LONGITUDE, 5h 17m 35.6s W    HEIGHT, 373 feet above sea level    SUBSOIL, Sand and Clay.

Time: G. M. T. MIDNIGHT TO MIDNIGHT.

INSTRUMENTS—Two Milne-Shaw Seismographs.

FROM..... To.....

NO.	DATE	PHASE	TIME	PERIOD	Amplitude			DISTANCE		
					$\overset{\wedge}{N}$	$\overset{\wedge}{E}$	$\overset{\wedge}{Z}$			
			h. m s.	s-	$\mu$	$\mu$	$\mu$	km		
DECEMBER continued.										
2669.	22nd.	e	18 13 15					Very small disturbance.		
		e	18 14 30							
		W	18 16 15							
		F	18 26 00							
N-S component, barely noticeable.										
2670.	26th	e	? 3 09 33					Active micros going on.		
		W	3 11 14							
		F	Micros.							
N-S component, micros mask phases.										
2671	27th.	i	15 03 08					Minute micros going on.		
		e	15 03 38							
		W	15 06 30							
	Papers changed at 15h 20m.									
	N	i	15 02 45							
		i	15 06 38							
2672.	28th.	e	18 11 23					E-W component, wind effect mask phases.		
		N	18 15 35							
		F	Micros.							
2673.	28th	L	23 14 45 to	23		9		Wind & micros mask phases. Sinusoidal waves shown		
		W	23 17 00							
	N	e	22 56 32					Amplitude small		
		L	23 02 08							
		L	23 19 19							
		L	23 25 38							
		F	Micros.							