

The instrumental record. There are only three seismograph stations from which records were probable,—in their order of distance from the epicentral area, Ottawa, Albany and Boston (Harvard). Ottawa and Harvard got records, while at Albany there was no record as the instrument was dismantled for removal to another location. At Harvard, there are two Bosch-Omori horizontal pendulums with mechanical registration. At Ottawa, there are two Bosch horizontal pendulums with photographic registration and a vertical seismograph of Spindler and Hoyer with mechanical registration, smoked paper. The horizontal pendulums at each station are mounted in the N-S, and E-W directions respectively. Below is the record of these two stations, the times given being transcribed into eastern standard time which is 5 hours slow on Greenwich time, in which latter time earthquake stations otherwise always express their times, for ready comparison with international stations.

OTTAWA.					HARVARD.			
Component.	Phase.	Time.	Period.	Ampli- tude.	Δ	Time.	Period.	Δ
		h. m. s.	s.	μ	km.	h. m. s.	s.	km.
V	P	7 29 07.2	.3	3	.....	.....	.....	.....
E	P	29 08.7	1.5	1	60	7 30 02	.8	435
N	P	29 09.5	1.0	1	.....	30 03	.7	.....
E	S	29 14.8	3.0	6	.....	30 50	.....	.....
V	S	29 15.0	2.0	20	.....	.....	.....	.....
N	S	29 15.2	.....	13	.....	30 53	.5	.....
V	M	29 16.6	3.5	30	.....	.....	.....	.....
N	F	30 00	.....	.....	.....	33 34	.....	.....
E	F	30 00	.....	.....	.....	33 34	.....	.....
V	F	31 15	.....	.....	.....	.....	.....	.....

Explanatory to the symbols in the above which are those of the International Seismological Association we find for the Ottawa record, in the first column—component—which refers to the pendulum, vertical, N-S, and E-W. Under—phase—we understand particular characteristics of an earthquake record. The first wave to arrive from the hypocentre is a longitudinal wave, a wave of compression or dilatation, similar to a sound wave, and is designated by *P* (primus). This is generally of very short period, a second or less. The next different waves to arrive are the transverse or distortion ones, propagated like the waves of light and designated by *S* (secundus). These are of a longer period than the preceding ones. Both the longitudinal and transverse waves are propagated as spherical, or