

EARTHQUAKE REPORTS.

SYMBOLS, NOTATION, ETC.

1. Character of the earthquake :—  
*d* Local shock perceptible at station, its intensity being expressed on the Rossi-Forel scale, thus : RF 1, &c.  
*v* Near shock (origin less than 9°, or 1,000 kilometres, distant).  
*r* Distant shock (origin from 9° to 45°, or 1,000 to 5,000 kilometres, distant).  
*u* Very distant shock or teleseism (origin more than 45°, or 5,000 kilometres, distant).
2. Phases of the seismogram [each of the following symbols may denote—(a) the phase itself ; or (b) the time of arrival of the first waves of that phase at the station ; or (c) the time of transit of those waves from the origin in seconds. There will be no ambiguity].
- |  |    |    |  |
|--|----|----|--|
| P ..   | .. | .. | Longitudinal waves, direct (first phase or first preliminary tremors).   |
| PR (or PR <sub>1</sub> ), PR <sub>2</sub> .... PR <sub>n</sub> | .. | .. | Longitudinal waves, reflected once, twice, <i>n</i> times at the earth's surface.  |
| S ..   | .. | .. | Transverse waves, direct (second phase or second preliminary tremors).   |
| SR (or SR <sub>1</sub> ), SR <sub>2</sub> .... SR <sub>n</sub> | .. | .. | Transverse waves, reflected once, twice <i>n</i> times at the earth's surface.   |
| S—P ..   | .. | .. | Interval (in seconds) between the arrival of the P waves and the S waves.  |
| PS ..  | .. | .. | Waves changed from longitudinal to transverse oscillation, or <i>vice versa</i> , through reflection at the earth's surface. |
| L ..   | .. | .. | Long waves (chief phase or principal part ; regular waves).  |
| L <sub>1</sub> , L <sub>2</sub> .... L <sub>n</sub>            | .. | .. | Successive series of L waves.  |
| L ..   | .. | .. | Long waves passing along the major arc of the great circle through the epicentrum and the observatory.                       |
- (Repeats of L or L<sub>1</sub> after a circuit or circuits of the earth are noted in the "Remarks.")
- |                   |    |    |                                      |
|-------------------|----|----|--------------------------------------|
| M ..              | .. | .. | Greatest motion in the chief phase.  |
| M <sub>1</sub> .. | .. | .. | Maximum of the L <sub>1</sub> waves. |
| C ..              | .. | .. | Tail or end portion                  |
| F ..              | .. | .. | End of discernible movement.         |
- 3 Nature of the motion :—
- |                   |      |    |   |
|-------------------|------|----|---|
| <i>i</i> sudden   | } .. | .. | { Beginning of the motion, used either alone or with one of the symbols in 2 denoting phase.  |
| <i>e</i> gradual  |      |    |   |
| T (period) ..     | ..   | .. | Time of one complete oscillation (to and fro).  |
| A ..              | ..   | .. | Amplitude of the motion, measured from the median line, in millimetres (mm., as shown on the seismogram), or in mikrons ( <i>μ</i> , actual movement of the ground) : ( <i>μ</i> = 1/1000 mm.). |
| A <sub>e</sub> .. | ..   | .. | E-W component of A.   |
| A <sub>n</sub> .. | ..   | .. | N-S component of A.   |
| A <sub>v</sub> .. | ..   | .. | Vertical component of A.  |
- 4 General :—
- |                   |    |    |   |
|-------------------|----|----|---|
| Time ..           | .. | .. | G.C.M.T., Greenwich civil mean time, 0h. or 24h. = midnight.    |
| E (epicentrum) .. | .. | .. | Position of epicentre.  |
| O (origin) ..     | .. | .. | Time of shock at origin.  |
| φ ..              | .. | .. | Latitude.   |
| λ ..              | .. | .. | Longitude from Greenwich.                                       |
| Δ ..              | .. | .. | Distance from epicentre in degrees (°) or in kilometres (kms.). |
5. The Observatory :—
- (a) Its position (latitude and longitude) : { Lat. S. 43° 31' 48".  
 Long. E. 172° 37' 13" (11h. 30m. 28.9s.).  
 Its height (in metres and in feet) above mean sea-level : 8 m. (25 ft.).
- (b) The kind of seismograph : Milne seismograph No. 16.  
 How installed (E.-W., N.-S., or vertical) : Boom N.-S.  
 Natural period (in seconds) : 16 ±.  
 Magnification : 6.  
 Damping : Nil.

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Time is Greenwich civil mean time ; it is given in hours, minutes, and seconds. 0h. or 24h. = midnight.

No.	Date.	Character.	Phase.	Time. G.C.M.T.	Boom Period.	Amplitude.	Remarks.
						Ae.	
1	1922. Jan., 1	<i>r</i>	S?	11. M. S. 19 59 00	S. 15	MM. ..	Duration, 1h.+.
			L	20 02 18	..	..	
			M	20 05 00	..	10.0	
2	,, 3	<i>r</i>	P	8 04 24	..	..	Duration, 25m.
			S?	8 07 12	..	..	
			L	8 08 24	..	..	
3	,, 19	<i>u</i>	PR <sub>1</sub> ?	8 10 42	..	1.2	Duration, 2h.
			M	22 09 24	..	..	
			S?	22 14 00	..	..	
4	,, 22	<i>r</i>	SR <sub>1</sub>	22 17 42	..	..	Duration, 2h.
			L	22 21 24	..	..	
			M	22 32 36	..	10.5	
5	,, 22	<i>r</i>	S?	3 33 54	..	..	Duration, 2h.
			SR <sub>1</sub>	3 36 12	..	..	
			L	3 39 48	..	..	
6	,, 31	<i>u</i>	M	3 45 42	..	4.2	Duration, 2h.+.
			S?	20 56 24	..	..	
			SR <sub>1</sub>	20 58 36	..	..	
7	,, 31	<i>u</i>	L	21 00 24	..	..	Duration, 2h.+.
			M <sub>1</sub>	21 03 48	..	..	
			M <sub>2</sub>	21 05 42	..	..	
8	,, 31	<i>u</i>	P?	13 42 12	..	..	Duration, 2h.+.
				13 44 42	..	..	
				13 50 12	..	..	
9	,, 31	<i>u</i>		13 52 54	..	..	Duration, 2h.+.
				14 04 00	..	..	
			L	14 17 36	15	5.5	