

GROUP VIII (b).—*Local Earthquakes observed in Tokyo  
and at one other place.*

*Eqke No. 28.* September 11th 1898; 10h 3m 32s p.m.

Total duration = 1m 7s.

Observations at Meteorological Observatories :—

Tokyo . . . . . 10h 3m 35s p.m. Slight.

Yokosuka . . . . . 10. 3. 35 „

This was a small earthquake at some distance. The P.T. lasted for 16s. (The beginning of motion was somewhat obscure).

The P.P. The max. 2a was 0,08 mm in the EW and 0,03 mm in the NS component.

*Eqke No. 60.* November 21st 1898; 9h 5m 53s a.m.

Total duration = ?

Observations at Meteorological Observatories :—

Tokyo . . . . . 9h 7m 5s a.m. Slight.

Kumagae . . . . . 9. 7. 19 „

This was a very small earthquake, the diagram showing merely slight traces of motion.

*Eqke No. 72.* December 19th 1898; 0h 0m 15s p.m.

Total duration = 1m 10s.

Observations at Meteorological Observatories :—

Mito . . . . . 11h 59m 30s a.m. Slight. { Motion quick, accompanied  
by vertical movements,

Tokyo . . . . . 11. 59. 42 „

This was a very small earthquake of a comparatively near origin.

The P.T. whose duration was 4s was well demarked and consisted of small and quick vibrations of an average period of 0,4s.

The P.P., whose duration was 14s, consisted of vibrations of an average period of 0,53s, there being no waves of longer period. The max. 2a was 0,08 mm in the EW and 0,04 mm in the NS component.

*Eqke No. 79.* January 8th 1899; 1h 11m 21s a.m.

Total duration = 2m 35s.

Observations at Meteorological Observatories :—

Tokyo	.. .. .	1h 16m 47s a.m.	Slight.
Utsunomiya	.. .. .	1. 12. 00	„

The was an extremely small earthquake.

P.T. lasted for 2,6s.

The P.P. The max. 2a was 0,02 mm in each component.

The E.P. The average period was 0,68s.

*Eqke No. 121.* April 11th 1899; 10h 5m 45s a.m.

Total duration = 1m.

Observations at Meteorological Observatories :—

Tokyo	.. .. .	10h 5m 58s a.m.	Slight.
Yokohama	.. .. .	10. 5. 55	„

(EW component).

The P.T., whose duration was 18s, consisted of very small and quick vibrations.

The P.P. lasted for 4,5s. The max. 2a of 0,16 mm (EW) occurred at the commencement.

The E.P. also consisted of very small and quick vibrations.

The record from the NS component pendulum was not obtained, as the earthquake happened while the drum of that machine was being changed.

*Eqke No. 129.* April 20th 1899; 5h 0m 31s p.m.

Total duration = 50s.

Observations at Meteorological Observatories:—

Tokyo	.. .. .	5h 10m 50s p.m.	Slight.
Fukushima	.. .. .	5. 10. 44	„

The P.T., whose duration was 9s, consisted of small and quick vibrations.

The P.P. The max. 2a, which occurred at the commencement was 0,16 mm in the EW and 0,08 mm in the NS component. The motion was active for about 3s, then there followed an interval of rest for about 1½s, when, in the EW component, there appeared a second max. 2a of 0,08 mm in the EW component. The motion was this time active for about 2s, so that the total duration of the P.P. was 8s.

The E.P. also consisted of small and quick vibrations.

*Eqke No. 137.* May 11th 1899; 5h 59m 12s a.m.

Total duration = 6m.

Observations at Meteorological Observatories:—

Yokohama	.. .. .	6h 1m 42s a.m.	Slight.
Tokyo	.. .. .	6. 1. 44	„

The P.T. lasted for 8,3s.

The P.P. which consisted entirely of small quick vibrations, began with the max. 2a of 0,05 mm in the EW and 0,01 mm in the NS component. The motion was active for the next 1½s. During the succeeding 3s the motion was small, when a second max. (abs.) 2a of 0,07 mm took place in the EW component, (very small, in the NS component). During the next 16s the motion was more or less active, there being occasional alternations of maximum and minimum groups.

The E.P. The average period was 7,2s.

*Eqke No. 144.* June 10th 1899; 10h 36m 56s p.m.

Total duration = 5m.

## Observations at Meteorological Observatories :—

Numazu	.. ..	10h 36m 52s p.m.	Weak.	Motion quick.
Tokyo	.. ..	10. 36. 58	Slight.	

The P.T. lasted for 8,4s.

The P.P. began with a max. 2a of 0,05 mm in the EW and 0,02 mm in the NS component. In the latter component, the motion consisted, for the next 31s, of small and quick vibrations, superposed more or less distinctly on slow waves of an average period of 8,3s. This part may probably be taken as the 2nd. P.T. After this the motion consisted principally of regular slow waves of an average period of 2,7s, of which the max. 2a of 0,07 mm occurred at 35s from the commencement of the P.P. In the EW component, the duration of the 2nd. P.T. was 22s, the motion following being characterized by the appearance of regular and larger vibrations of an average period of 3,2s. The max. 2a in this component was 0,06 mm, and occurred at 22s and also at 35s from the end of the (1st) P.T.

*Eqke No. 191.* September 2nd 1899; 3h 15m 45s a.m.

Total duration=9m.

## Observations at Meteorological Observatories :—

Tokyo	.. ..	3h 16m 9s a.m.	Slight.
Matsumoto	.. ..	3. 16. 27	„

The beginning and end were somewhat obscured by P.O. In the earlier portion, the motion consisted of small vibrations of an average period of 1,7s. At about 3m 20s from the commencement, there appeared the P.P., whose average period was 5,3s, and whose max. 2a was 0,03 mm in the EW and 0,04 mm in the NS component.

P.O. The average period measured about 1h before the earthquake, was 3,6s.

*Eqke No. 213.* October 10th 1899; 1h 12m 43s a.m.

Total duration=about 8m.

## Observations at Meteorological Observatories :—

Fukushima .. 1h 15m 54s a.m. Slight.

Tokyo .. .. (not observed.)

This was a small earthquake at some distance. The beginning and end of the motion were rendered indistinct by the presence of slight P.O. P.T. was not well defined.

The motion began very gradually, and the P.P. consisted essentially of waves of an average period of 6s, superposed with small and quick vibrations. The max. 2a was 0,05 mm in the EW and 0,04 mm in the NS component.

The E.P. The average period was 5,1s.

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