

GROUP VIII (c).—*Local Earthquakes observed only in Tokyo.*

*Eqke No. 6.* July 25th 1898; 6h 37m 57s a.m.

Total duration = 41s.

This was an extremely small local shock, having occurred while the eqke No. 5. was not yet completely ended.

The P.T. lasted for 4,9s in the NS and 6,7s in the EW component.

The P.P. consisted of waves of an average period of 9,4s, superposed on small quick vibrations. The max. 2a was 0,03 mm in the NS and 0,06 mm in the EW component.

*Eqke No. 15.* August 17th 1898; 4h 26m 50s p.m. (Cent. Met. Obs. 4h 16m 23s. Slight.)

Total duration = about 1m.

The P.T., whose duration was 6,6s, was well defined and consisted of small vibrations of an average period of 1,2s, superposed with others still smaller.

The P.P. began with a displacement of 0,05 mm towards E and 0,02 mm towards S, followed by a counter-motion (max.) of 0,12 mm towards W and 0,04 mm towards N.—The vibrations in the earlier portion had an average period of 1,5s, superposed with still smaller movements. There was no trace of waves of longer period.

*Eqke No. 52.* November 6th 1898; 9h 0m 50s a.m. (Cent. Met. Obs. 9h 2m 24s. Intensity, slight.)

Total duration = about 15m.

The origin of the earthquake was evidently at some distance, and the motion began very gradually.

The P.T. lasted for about 41,5s and consisted of very small vibrations

of an average period of 2,3s, superposed on very slight traces of others of longer period.

The P.P., whose duration was 2m 20s, consisted of vibrations of an average period of 4,8s. The maximum motion was 0,06 mm in the EW and also 0,06 mm in the NS component.

The E.P. The average period was 4,5s.

P.O. There were present very slight traces of P.O., whose average period was 4,9s.

*Eqke No. 74.* December 27th 1898; 4h 43m 42s p.m.

Total duration = 42s.

This was a very small local shock.

The P.T. lasted for 10s.

The P.P. consisted entirely of very small quick vibrations. In the EW component, the max. 2a of 0,08 mm occurred at about 2s from the commencement of this epoch, followed 2s later by a second max. 2a of 0,05 mm. In the NS component there were similarly two maximum movements, each equal to 0,03 mm.

P.O. There existed small quick P.O., whose max. 2a was 0,03 mm in each component; the average period being 4,0s.

*Eqke No. 75.* December 29th 1898; about 4h 12m a.m.

Total duration = about 3m.

This was a very small earthquake and the motion consisted of slight quick vibrations.

The P.T. lasted for about 20s.

The P.P. The max. 2a was 0,04 mm in the EW and 0,02 mm in the NS component.

The E.P. The principal average period was 2,5s.

*Eqke No. 78.* January 5th 1899; 9h 1m 3s a.m. (Cent. Met. Obs. 9h 1m 38s. Slight).

Total duration = 50s.

Slight P.O. existed throughout the day.

The P.T., whose duration was 9s, consisted of very small movements superposed on distinct slower ones of an average period of 4,8s.

The P.P. The maximum displacement, which occurred at the commencement of this stage, was 0,12 mm towards W and 0,15 mm towards N, the rest of the motion being very small. Motion was, however, more or less active during 7s. The well defined waves had an average period of 4,4s, superposed with much smaller ones.

*Eqke No. 91.* February 21st 1899; 1h 10m 5s a.m. (Cent. Met. Obs. 1h 10m 45s a.m. Slight).

Total duration=4m 20s.

The P.T. lasted for about 2,3s.

The P.P. consisted of very small quick vibrations. The max. motion occurred at the commencement.

*Eqke No. 101.* March 13th 1899; 10h 51m 53s p.m. (Cent. Met. Obs. 10h 52m 1s. Slight).

Total duration=30s.

There existed slight P.O., on whose account the end of the earthquake can not accurately be determined from the diagram. Immediately before the eqke, the average period of P.O. was 7,2s.

The P.T. lasted for 5,6s.

The P.P. lasted for 10s and began with a motion of 0,02 mm towards W and 0,01 mm towards S. In the EW component, a second (abs.) max. 2a of 0,05 mm occurred 2s later on, but in the NS component there was no corresponding maximum.

The motion consisted throughout of very small quick vibrations.

*Eqke No. 116.* March 29th 1899; 11h 42m 14s p.m. (Cent. Met. Obs. 11h 41m 32s. Slight).

Total duration=3½m.

The origin of this earthquake was at some distance, and the motion showed no single well pronounced maximum.

The P.T. lasted 19s. The motion consisted of very small quick vibrations.

The P.P. The max. 2a was 0,04 mm in the EW and 0,01 mm in the NS component.

Towards the very end of the earthquake the average period was 4s.

*Eqke No. 158.* July 7th 1899; 6h 32m 16s a.m.

Total duration = 1m.

This was a very small local shock observed only at the Seismological Institute.

The P.T. lasted about 4s (?)

The P.P. began with the max. 2a of 0,1 mm in the EW and 0,05 mm in the NS component. In the EW component there was a second max. 2a of 0,1 mm 2s later on; in the other component the corresponding max. 2a was insignificant.

*Eqke No. 227.* November 7th 1899; 4h 48m 50s p.m. (Cent. Met. Obs. 4h 45m 54s. Slight).

Total duration = 1m 20s.

The P.T., which was well defined, lasted for 8,9s in the EW and 6,9s in the NS component, the motion consisting of extremely small and quick vibrations.

The P.P. began with a motion of 0,06 mm towards E and 0,05 mm towards S. The maximum motion, which occurred near the commencement of this portion was 0,08 mm in the EW and 0,1 mm in the NS component. There was a 2nd max. 2a of 5,8s later on, the displacement being better marked in the NS than in the EW component.

*Eqke No. 241.* December 14th 1899; 2h 29m 36s a.m.

Total duration = 2½m.

The motion was very small in both components.

The P.T. lasted for 18s in the EW and for 12,4s in the NS component.

P.O. There existed slight P.O., whose maximum motion was 0,02 mm in each component, and whose average period was 3,9s.

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