

## 6. Summary of the Observations at Hitotsubashi.

The average values of the elements of earthquake motion at Hitotsubashi for the different groups are collected in Table XII, the general mean results being as follows.

*Horizontal Motion* (64 earthquakes) :—

Duration=101 sec.

Maximum Motion=0.70 mm.

Period of max. motion=0.77 sec.

Maximum velocity=2.4  $mm/sec.$

Maximum acceleration=20.0  $mm/sec.^2$

Average period=0.76 sec.

*Vertical motion* (10 earthquakes) :—

Duration=58 sec.

Maximum motion=0.22 mm.

Period of max. motion=0.54 sec.

Average period=0.53 sec.

Thus it seems that the mean value of the period of the maximum vibration, both in the horizontal and the vertical component, seems to be practically identical with that of the average period. The case might be different if we take only strong earthquakes.

The horizontal motion lasts twice as long as the vertical motion, the max.  $2a$  and  $T_0$  of the former being respectively about 3 and 0.7 times those for the latter.

TABLE XII.—SUMMARY OF THE HITOTSUBASHI OBSERVATIONS.

Group.	Horizontal Component.					Vertical Component.			
	Duration. (sec.)	Maximum motion.			Average period. (sec.)	Duration. (sec.)	Maximum motion.		Average period. (sec.)
		2a (mm).	T <sub>0</sub> (sec.)	V (mm/s).			A (mm/s <sup>2</sup> ).	2a (mm).	
I	87	0.36	0.77	1.51	12.6	0.79	—	—	—
II	133	1.09	0.81	3.7	28.2	0.75	0.3	0.57	0.55
III	83	0.31	0.80	1.34	10.7	0.79	—	—	—
IV	85	0.38	0.70	1.70	15.7	0.72	0.1	0.5	0.45
V	116	1.21	0.82	3.03	23.6	0.82	0.2	0.38	—
VI	125	0.68	0.71	3.1	28.8	0.66	—	—	—
VII	140	2.73	0.83*	5.2	21.8	0.85	—	—	—
Average.	101	0.70	0.77	2.4	20	0.77	0.22	0.54	0.53

(\* In this case, there was also a period of 1.8 sec.)