

**DETECTION OF SEISMIC ZONES BY MEANS OF BAROMETRIC GRADIENT.<sup>1</sup>**

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The barometric gradient as a secondary cause of earthquake has already been discussed by Terada [Abs. 778 (1909)] and by Hasegawa. The latter has shown that the barometric gradient in Gihu district at the epoch when an earthquake in that district occurs, is generally perpendicular to the dislocation line of the Mino-Owari earthquake in 1891. Nagaoka suggested that if such is the case in general a clue may be found for detecting the direction of some unknown seismic zones or dislocation

lines. The method, if feasible, will probably be more accurate than to construct the zones statistically by locating a large number of epicenters. The present author, to test the general applicability of the method, has taken 50 earthquakes, all weak or slight, observed in Tukuba during 1904. Hasegawa's method was adopted of taking the barometric pressure just at the moment of the earthquake by graphical interpolation from 4 observations, while the gradients were given by Okada's process. Tables are given, and the result is found that the direction of the prevailing gradient at the epoch of earthquakes is nearly perpendicular to the seismic zone found by Omori from statistical grouping of epicenters. This confirms Hasegawa's results and realizes Nagaoka's suggestion.—*H. H. Hodgson*].

<sup>1</sup> See Proc. Mathematical-physical Society, Tokyo, 1915, 8 : 69-72.