

is in a critical condition of equilibrium, some connection may be expected to be traceable between the frequency of earthquakes and the earth's position with regard to the moon and sun, on the one hand, and changes of atmospheric conditions, on the other. A comparison of the dates of recorded earthquakes seems to bear out the following conclusions: 1st. An earthquake maximum occurs about the time of new moon; 2d. Another maximum appears two days after the first quarter; 3d. A diminution of activity occurs about the time of full moon; 4th. The lowest earthquake minimum is on the day of the last quarter.¹⁹¹ There is likewise observable a seasonal maximum and minimum, earthquakes over most of the northern hemisphere occurring most frequently in winter, and least frequently in summer.¹⁹² Out of 656 earthquakes chronicled in France up to the year 1845, three-fifths took place in the winter, and two-fifths in the summer months. In Switzerland they have been observed to be about three times more numerous in winter than in summer. The same fact is remarked in the history even of the slight earthquakes in Britain. A daily maximum appears to occur about 2.30 A.M., and a minimum about three-quarters of an hour after noon. No connection has yet been satisfactorily established between the occurrence of earthquakes and sun-spots. The greater frequency of earthquakes in winter might be expected to indicate a relation between their occurrence and atmospheric pressure, and possibly earthquakes are more frequent with a low than with a high barometer.¹⁹³

¹⁹¹ J. F. J. Schmidt, "Studien über Erdbeben," 2d ed. (1879), p. 18.

¹⁹² Ibid. p. 20. See the works of Perrey cited on p. 459.

¹⁹³ Schmidt, op. cit. p. 23. F. Gröger, Neues Jahrb. 1878, p. 928. There does not appear to be any marked connection between the state of the barometer and the occurrence of earthquakes in Japan—J. Milne, "Earthquakes," p. 268.