

Activity change of aftershocks of the Ansei Edo earthquake of November 11th, 1855

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Ansei Edo earthquake occurred at 11 PM, November 11th, 1855 at a point just below the city zone of Edo (Tokyo at present). Due to this earthquake, it is suggested that more than 10,000 people were killed in Edo. The location of the epicenter, its magnitude, and its fault mechanism is still not clarified. In the present study, we studied on the activity change of aftershocks by using descriptions of felt earthquakes written in diaries. We made a data base of felt earthquakes occurred in the period between the beginning of the first year of Kaei (1848) and the end of the first year of Man-en (1860) in Kanto district including the Edo city zone. In general, more than ten kinds of diaries were kept in the Tokyo city zone. Most reliable one is "Reiken Kobo" which is the diary kept at the Edo Astronomical Observatory in Kudan-Ue street. Diaries with descriptions of felt earthquakes were kept at more than ten cities on the Kanto Plain. We compiled a database of those records of felt earthquakes. We gathered electronic 3,192 cards of records of felt earthquakes in total. It is clarified that earthquakes were felt at Tokyo 543 times in total. The left figure shows the diagrams of felt earthquakes at Edo in two two years from the beginning of 1855 to the end of 1856. We can recognize that the aftershock period is finished generally at May 1856. An eminent earthquake occurred at Tokorozawa, about 40 kilometers WNW of Tokyo, which is considered as an earthquake induced by the Ansei Edo Earthquakes (an aftershock in wider sense). The right figure shown diagram of felt earthquakes in the period of 13 years between 1848 to 1860. The activity of earthquakes induced by the Ansei Edo earthquakes continued up to the end of the year of Ansei 5 (1858).

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