

Database of Volcanic Earthquakes and Tremor in Japan

Japan Volcano Seismological Data Group

We collected and summarized seismological data of volcanoes in Japan based on previously published papers and reports. Since the pioneer works of Drs. Ohmori in the early 20th century, a large number of volcanic earthquakes and tremor have been observed at more than 30 volcanoes. Although the results of analyses on waveform characteristics and source mechanisms have been documented in many reports and papers, they are not summarized in an easy access style in spite of their importance and usefulness for monitoring the volcano. Therefore, we collected and arranged them in a simple style to make an efficient database of these seismic events. In the database, each result of each volcanic earthquake and tremor is summarized in one page with related figures, which enable us to easily reach the topics necessary based on types of earthquakes and tremor, volcano name, waveform characteristics, source locations, source mechanisms, relations to the volcanic activity and so on. Although we use the names of the volcanic earthquakes and tremor originally defined by the authors in the papers since the names express one side of the characteristics of the events, non-unified definition sometimes confuse not only volcanologists but also volcano seismologists. Hence, we further classify the volcanic earthquakes and tremor by ourselves based on (1) dominant and/or characteristic frequency of the seismic waves, (2) relation to the volcanic activities, and (3) source mechanisms. The database of volcanic earthquakes and tremor are now summarized in printed documents, which can be utilized for monitoring the volcanic activity and understanding the volcanic system. We have a plan to have a web site in near future to promptly access the data base from many places.

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