

Anomalous seismic attenuation waveforms observed in Kirishima volcano: trial to explain by thin sill-like sheet model

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To explain the seismic wave attenuation which depends on the seismic wave frequency beneath Kirishima volcano, the model that the seismic wave passes through the thin sill-like sheet has been proposed. In this paper, we investigate the waveforms passing through such a sheet with various thickness and physical parameters of inside material, and try to explain the observed attenuated waveforms through the model. They can be almost explained by the model, in which the sheet thickness is less than 100 m and the P wave velocity and density inside the sheet are about 1.5 km/s and 1 g/cc, respectively, assuming that those outside the sheet are 6 km/s and 2.5 g/cc. These parameters suggest the existence of strongly bubbly magma, water and so on, although the further discussion is needed.