

The shape of Philippine sea plate and the subsurface structure near Mt. Fuji

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A shape of plate is essential information for understanding not only locations, mechanisms, magnitudes and occurrence cycles of earthquakes, but also positions of volcanic fronts. Ishida, 1992 and Hirose et al., 2008 produced models of Philippine sea plate, but even Hirose et al., 2008 plate shape does not necessary fit to recent seismic velocity structure by Matsubara et al., 2017. Takahashi (2019, JpGU) explained the possible cause of the size and the position of Mt. Fuji using the shape of Hirose et al., 2008, but there are some misfits to subsurface seismic structure near Mt. Fuji. In this study, we utilize not only the 6 by 6 min grid of seismic velocity structure by Matsubara et al., 2017 but also 3 by 3 min grid of the same model, we constructed a shape model of Philippine sea plate beneath Mt. Fuji.

The convex shape of the plate beneath the Mt. Fuji has more curvature than that of Hirose et al., 2008, thus more influence from the Pacific plate on the Philippine sea plate than before is interpreted.

Keywords: shape of Philippine sea plate, seismic structure beneath Mt. Fuji