

Structure analysis of the Ryukyu arc by the receiver function

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The Ryukyu arc have converted plate boundary and back arc basin. The volcanic front in Tokara Islands is the main volcanism. Moreover, The activity of shaped Trough is supposed (Kimura, 1985). In addition, by the survey of igneous activity, the Okinawa Trough have upper flow mantle. Analyzed by receiver function in the Ryukyu arc, McCormack et al., (2013) ware anisotropy structure of slab beneath F-net station.

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However, it was unknown how changed the structure in the slab and wedge mantle structure changed in the subducting direction. Therefore we clarified I sank by making a receiver functional analysis section at right angles to an errand, the trench including a seismometer record in addition to F-net broadband seismometer record in a short period of the Japan Meteorological Agency,(JMA) and how a Slavic angle changed into the direction.

In the receiver function analysis, we use 8 of short-period seismograph by JMA and 3 of broadband seismometers by NIED F-NET established in central Ryukyu . An analysis period is 2002 to 2013. and used 113 remote earthquake events more than M6.0 for analysis.

In receiver functional analysis, the discontinuity imaging depth is as same as JMA , in Okinawa-honto beneath 40km.

Keywords: receiver function, Ryukyu arc, mantle wedge