

A resistivity structure at the subduction zone of Philippine Sea Plate in the southern Kyushu district

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A two-dimensional electrical resistivity structure is inferred at the subduction zone in the southern Kyushu district with the ABIC inversion technique.

The features of our resistivity model are as follows.

First is that the vertical conductive block (below 1 Ohm-m) underlies the Kirishima Volcanic Group. Then the conductive block spreads laterally below 40 km in depth. This conductive block is interpreted as the partial melting.

Secondly, the conductive block exists under the resistive block in the forearc region. The depth of the boundary is about 20 km. The resistivity of the conductive block is about 30 Ohm-m. Since this conductor corresponds with the negative Bouguer anomaly, we interpret that the conductor indicates the serpentinite.