

On interpretation of the magnetic anomalies in the Suruga Bay

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The magnetic anomalies found in the Suruga Bay seem to be related with geographical features there. In order to investigate a possible source of the magnetic anomalies, we first assume that strongly magnetized seamounts sitting on the Philippine sea plate subduct there, and that they push the overriding plate. We then attempt to determine the seamount structure by solving an inverse problem for geomagnetic anomaly data. For this, we simply apply a two-dimensional dike model in order to obtain a rough image of seamounts, although they are definitely of three-dimensional nature. It turns out that a dike with strong magnetization corresponds to the focus of magnetic anomaly distribution. Taking into account these results, we plan to determine the three-dimensional structure of seamounts.