

Rock magnetism of Shikoku Serpentine zone

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All of the dipole anomalies observed in the Kurosegawa tectonic zone can be interpreted in terms of structural model, in which the anomalous sources of magnetization are located in a mid-crustal layer and probably comprise intrusive rocks. These intrusions are probably serpentinite diapirs associated with the dehydration of subducted slabs of the Philippine Sea Plate. Using a fine-scale magnetic anomaly data based on high density air-borne surveys, we have identified several dipole anomalies aligned east-west direction exactly on the Chichibu South to Kurosegawa tectonic zone, which constitutes a part of an accretionary prism in the southwest Japan. We have been investigating four sites along the tectonic line and applied a magnetic inversion to one of the dipole anomalies found here, and figured out the magnetic source as a spheroidal shape standing in parallel to the tectonic line and slightly inclined southward.