The tectonomagnetic field estimated from magnetic anomalies and regional strains

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In this study, we have developed a method to estimate piezomagnetic changes from magnetic anomalies and regional strains.

In general, the linear piezomagnetic effect is represented by a tensor equation. However, under some conditions, stress-induced magnetization can be obtained only by rotating and a scalar multiplication of the initial magnetization. Therefore, the piezomagnetic field can be estimated by a simple method similar to reduction to the pole used for data analysis of aeromagnetic survey results.

At the meeting, we will apply the new method to the magnetic anomaly and the regional strain in Japan.