

Estimation of piezomagnetic field based on geodetic observation

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We estimated piezomagnetic field distribution around the Japanese islands based on geodetic data in order to determine appropriate position of geomagnetic observation sites for monitoring physical state in the crust's interior.

Stress and magnetization must be determined in order to calculate piezomagnetic field. Displacement field data which are provided from Geographical Survey Institute are used to determine stress field. Magnetization is estimated from geomagnetic survey result.

We will talk about estimated piezomagnetic field distribution and will talk about the effectivity of some of the analyzing method such as polynomial approximation and spherical harmonic analysis which are used for detecting local geomagnetic changes.