

## Stress field estimated from microseismicity in the northeastern edge of the Honshu around the junction between the northeastern Japan arc and the Kurile arc

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We report the present stress field in the northeastern edge of Honshu, NE Japan. The northeastern edge is located around the junction between the northeastern Japan arc and the Kurile arc, and is influenced by the subduction of the Pacific Plate and the southwestward movement of the Kuril Forearc Sliver. However, the seismicity is extremely low in this region. In this study, we investigated focal mechanism solutions of the microearthquakes in the northeast edge of Honshu. The focal mechanisms determined in this study are mainly E-W compressional reverse-fault type in the land area, while N-S compressional reverse-fault type in the sea area. We applied the stress tensor inversions to the focal mechanisms. The estimated stress field is the reverse-faulting type with the NE-SW trending maximum compressional stress axis. The direction of the compressional axis around the junction is rotating even in the result of Terakawa and Matsuura (2010). These results suggest that the northeastern edge of Honshu is largely influenced by the southwestward movement of the Kuril Forearc Sliver. In this presentation, we discuss on the spatiotemporal variations of the stress field there estimated from current microseismicity and the paleostress fields inferred from geological structures.

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### Reference:

Terakawa T, Matsu'ura M (2010) The 3-D tectonic stress fields in and around Japan inverted from centroid moment tensor data of seismic events. *Tectonics* 29:TC6008. doi:10.1029/2009TC002626.