

## Sub-slab anisotropy in the western Pacific : The Izu-Bonin and Mariana regions

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Understanding the mechanism of plate subduction helps us put together a whole picture of how the mantle works under plate tectonics. The sub-slab seismic anisotropy serves as a direct tool for illuminating subduction dynamics, implying the flow direction and deformation patterns of subducting slabs.

We measured source-side shear wave splitting with receiver-side correction for the Izu-Bonin and Mariana subduction zones. The initial results show that the deeper slab is associated with larger delay times (dt) in Izu-Bonin region, while delay times of deeper slab in the Mariana are smaller. The fast directions (f) of the two regions seem to be random with respect to the slab contour. However, anisotropy for shallow events in the Izu-Bonin slab is consistent with the relative plate motion. The next step is to consider the radial anisotropy in the receiver-side correction.