

## Precise determination of the past (3-15Ma) motion of the Philippine Sea Plate on the basis of submarine topography

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The rotation axis (Euler pole) and rotation velocity for the past (15-3 Ma) Philippine Sea Plate motion were determined on the basis of the geological, geophysical and geographical constraints. At first, I adopted the geological constraints that the Philippine Sea Plate should have been moving as the Izu volcanic arc has been collided with central Japan (South Fossa Magna area) between 15 and 3 Ma. Next, the geophysical observation that the leading edge of the Philippine Sea Plate slab below central Japan, was used for the past 15 m.y. total movement of the Philippine Sea Plate. Thirdly, geographical characters that the Palau Trench is disappeared from its southern end, and fan-shape of the Ayu Trough indicating the ocean floor spreading since 25 Ma, gave me significant constraints, because they are the geological result of the relative movement between the unknown Philippine Sea Plate motion and well determined Pacific Plate motion. As a result, the Euler pole (37E,150E) and rotation velocity (1.4/m.y.) of the Philippine Sea Plate motion were precisely determined for the interval between 15 and 3 Ma.