

Tectonic Framework of the Izu-Bonin Arc

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Tectonic framework of the Izu-Bonin Arc was established by using various geophysical parameters such as Trench axis, sediment thickness of the trench floor, outer arc high, canyons, calderas, volcanic front, backarc depressions, en echelon seamount group, horst & graven, crustal thickness, gravity, magnetics, depth of Moho and so on. The arc is divided into three segments by two major tectonic lines, Aogashima Tectonic Line and Sofugan Tectonic Line. The evolution of the Izu-Bonin Arc shows the northward maturity due to the difference of the duration of subduction of the Pacific Plate.