

Tonalitic plutonic rocks in the Komahashi-Daini Seamount, northern part of the Kyushu-Palau Ridge

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Plutonic rocks in the Komahashi-Daini Seamount assume importance for existence of silicic plutonic igneous activity in the early arc volcanism. These plutonic rocks are separated into two types: hornblende-biotite bearing tonalite series dredged from 1000-2000m depth and hornblende bearing and biotite less tonalite series dredged from 2000-4000m depth. Characteristics of the latter tonalite are very low content of LIL elements in the bulk chemistry, typical arc volcanic MORB-normalized trace element pattern, and remarkable negative europium anomaly in the REE pattern. These characteristics are different from that of Tanzawa plutonic rocks which are assumed to expose lower-middle crust of island arc. Both plutonic rocks have different magma process.