

SVC052-13

会場:302

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## 島弧下マントルかんらん岩の岩石学的性質 Petrological characteristics of subarc mantle peridotites

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We would like to make a review of petrological works on the subarc mantle, which were pioneered by Kuno (1967) on peridotite xenoliths from the Megata volcano (Ichinomegata crater). After the works of Kuno, peridotite xenoliths from the Japanese island arcs, including those from the Megata volcano, have been extensively studied mainly by Japanese scientists. Petrological data on subarc xenoliths from the Philippines, Papua and Kamchatka have been accumulated to enable us to build a petrologic model of subarc mantle. Peridotite xenoliths from the SW Japan arc are representative of subarc mantle impacted by plume-related magmas. The Megata peridotite xenoliths, which are varied in degree of melting, may represent the backarc-side upper mantle of an arc, whereas the xenoliths from Avacha (Kamchatka) and Iraya (Philippines), which show high degree of melting and metasomatism, were from the upper mantle beneath a volcanic front. The degree of partial melting and metasomatic modification of peridotite is highest beneath the volcanic front, and decreases continent-ward. Backarc basin opening, if any, produced a series of depleted peridotite.

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