The report of age and isotope ratio from Far East Asian meimechite like rocks

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In the Sikhote Alin area, there are two old subduction zones ranged north to south as accretional prism, which are the Jurassic - Early Cretaceous and the Early Cretaceous - Late Cretaceous. The accretional prisms were composed of ophiolite and greenstone, which are intruded ultra mafic volcanic dyke and alkali basalt and picritic basalt.

In these volcanic rocks, they are contained of high MgO basalt, which is called the meimechite. The meimechite contained of MgO is higher than the picritic basalt, but it contains less total alkalic component than a general alkaline rock, and the major components are similar to Archean komatiite. Boris I. Malyuk and Albert A. Sivoronov (1984) defined that the meimechite (maymechite) is similar of major element components more ultrabasic rock from first fined meimechite in the northern part of Siberian Platform. According to IUGS (2000) classification, it is redefined that the meimechite and komatiite is similar component of MgO (18-30 %) and total alkalic (less than 2%) and their age, but divided by TiO₂ (meimechite; TiO₂ is more than 1 %). To resolve the magma source of meimechite is important, because the komatiite source is expected similar to source source component, and it might be good help to consider its forming tectonics that the collision and/or subduction of the plateau lava intrusion may have caused uplift of the forearc ophiolite body.

In this study, we obtained the pilot data of the Sikhote Alin Cretaceous ultramafic rock is considered meimechite from that is analysed the data of major and trace element by XRF, and the K-Ar age is 134.4 (+/-) 2.7 Ma. The analysed data indicated similar to HIMU and/or Indian MORB data from Rb-Sr-Nd-Sm isotope ratio but Pb ratio is indicated lower than HIMU source and its Os data is higher like picrite, komatiite and peridotite. From noble gas analysis, the abundance of all noble gas is MORB, however, Kr and Xe isotope ratio have anomaly from derived fission component similar to diamond source. We try to merge these isotope data to consider its tectonics and magma source that the collision and/or subduction of the plateau lava intrusion may have caused uplift of the forearc ophiolite body. And we also would like to report meimechite like basalt from Mineoka and Setogawa picrite, of which sampling sites are referred from Ishiwatari (2006) and Shiraki (2005). Finally, we grateful thank that Dr. Jiro Naka and Dr. Naoto Hirano for their advice to us for the sampling location in Mineoka and Setogawa.