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The evidence of paleosubduction in the northeastern Siberian craton (the features of mantle xenoliths from kimberlite pipes)

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The north-eastern part of Siberian craton has a complex history of formation. The time of craton accretion ie evalueted as 3.2 Ga. Also several stages of metasomatic process were observed in the lithoshere mantle under Siberian craton. The presence of eclogite xenoliths from kimberlite pipes indicates the influences of ancient metamorphic processe and subduction component. The eclogite and pyroxenite xenoliths from upper-Jurassic Kuoika kimberlite field were analized, the mineral chemical and oxygen isotope composition were studied. The minerals from eclogite xenoliths demonstted the Eu-minimum anomaly, that indicate the presence of plagioclase in protholith of studied rocks. Also they characterized the high oxygen isotope composition (5.4 - 6.7 in Cpx, 5.8 - 6.3 in Grt). Thus suggested the reaction the primary depleted peridotites of TTG melts during subduction.

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