

## **PLATEAU BASALTS AND ASSOCIATED SUBALKALINE PICRITES FROM PUTORANA PLATEAU, SIBERIAN CFB PROVINCE: EVIDENCE FOR DEEP MELTING IN SIBERIAN PLUME**

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Siberian traps constitute one of the largest CFB provinces with the major part of the volcanic rocks there being confined to Putorana subprovince. We report the results of the investigation of melt inclusions as well as trace and major element data for the representative collection of the plateau basalts and associated subalkaline picrobasalts from Putorana plateau. No picritic rocks have been investigated so far in details from this area.

Trace-element characteristics of subalkaline picritic basalts and tholeiitic flood basalts are drastically different: picrites are enriched in highly incompatible elements, they show very steep REE patterns, and they possess weak positive Nb-Ta anomalies, whereas flood basalts are characterised by prominent negative Nb-Ta anomaly, highly incompatible show only moderate degree of enrichment by comparison with primitive mantle, and REE patterns are relatively flat. The situation with Nb-Ta anomalies implies that crustal contamination could have played an important role for flood basalts but was not significant in the case of picritic magmas. Homogenised melt inclusions in Ol and Cpx phenocrysts are characterised by larger spread of TiO<sub>2</sub> contents (up to 8.5%). Solidified inclusions contain high-Ti daughter minerals including armalcolite. Composition of picritic rocks and trapped melts imply high pressures of magma generation: high LREE/HREE (deep in garnet stability field), low Na/Ti (stabilisation of Jd in Cpx at high P), K and P minima on spidergrams (entry into Cpx and Grt respectively at high P).