

## Siberian Large Igneous Province: structure and genetic problems

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Origin of the Siberian Large Igneous Province (SLIP), the largest continental province on Earth, is under discussion for three decades. The most common points of view on its formation are a superplume action [1] and delamination of the Earth's crust [2]. But they do not explain many geological features of the province's structure, in particular, the relationships between rift and platform magmatism. Meanwhile, the most important characteristic of the province is the combination of two types of magmatic formations: typical traps – tholeiitic basalts covering huge areas on the ancient East Siberian platform –, and rift formations significantly varying in thickness and composition. The latter are confined exclusively to the Yenisei-Khatanga trough in the north part of the province. In contrast to the widespread idea of the final role of rifting in the LIPs formation [3], rift magmatism records its beginning within the SLIP (Ivakiński-Syradasaysky, Syverminsky, Gudchikhinsky magmas). Our study of volcanic rocks in the Norilsk and Maimecha-Kotuy areas demonstrates [4] that later (from the Khakanchansky time) it operates synchronously with platform magmatism until the end of magmatic activity in the province (Tuklonsky, Morongovsky, Arydzhansky, Pravoboyarsky, Maimechinsky formations). This synchronism was not fixed and explained earlier despite its fundamental value for our understanding of the SLIP origin. An

adequate model must take into account a real evolution of tectonic and magmatic events in space and time around the province.

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### References

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