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CCEPTED MANUSCRIPT

Paleomagnetism of the Permian-Triassic intrusions from the Tunguska syncline and the

Angara-Taseeva depression, Siberian Traps Large Igneous Province: evidence of

contrasting styles of magmatism

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Abstract

Based on the detailed paleomagnetic investigation, we distinguished different styles of

intrusive magmatic activity in two regions of the Siberian Traps Large Igneous Province (LIP).

The emplacement of intrusions in the Angara-Taseeva depression (the southern periphery of the

Siberian Traps LIP) occurred as brief but intense bursts of magmatic activity that led to the

emplacement of large and extensive sills. We argue that this pulsating style of intrusive

magmatic activity is common for the margins of the Siberian Traps LIP. We also estimated the

duration of the main magmatic events as $<10^4-10^5$ years for the large sills and their area of

manifestation (>200-250 km in diameter and dozens of thousands km² in square). On the

contrary, in the central part of the Siberian Traps LIP (the Tunguska syncline) the intrusive

magmatism was more or less continuous without intense peaks of magmatic activity.

Furthermore, we obtained the first reliable magnetostratigraphic data from the volcanic section

of the Tunguska syncline. Finally, we analyzed the available paleomagnetic and

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