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# New data on paleomagnetism and geochronology of the Precambrian dikes in NE Fennoscandia, the Kola Peninsula

Roman Veselovskiy (1,2,3), Alexander Samsonov (3), and Alexandra Stepanova (4)

(1) Lomonosov Moscow State University, Geological, Moscow, Russia (roman.veselovskiy@ya.ru), (2) Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Russia, (3) Institute of Geology of Ore Deposits Petrography Mineralogy and Geochemistry, Russian Academy of Sciences, Russia, (4) Institute of Geology, Karelian Research Centre, Russian Academy of Sciences, Russia

Paleomagnetism of Proterozoic dikes of Scandinavia, Karelia, and southern part of the Kola Peninsula is extensively explored in many studies (Veikkolainen et al., 2014). In particular, the paleomagnetism of intrusive formations in the southern part of the Kola Peninsula is thoroughly scrutinized in the study authored by Alexey Khramov and his colleagues (Khramov et al., 1997). However, information about the systematic paleomagnetic studies of the Archaean and Proterozoic dikes of the Central Kola block and, especially, Murmansk block are absent.

Based on the results of preliminary paleomagnetic investigation of 57 Precambrian dikes of the Kola Peninsula, in 31 of them a stable monopolar component of natural remanent magnetization is revealed. The peculiarities of distribution of this magnetization component within the Kola Peninsula and the rock magnetic characteristics of the dikes in which this component is isolated suggest its secondary nature and relate the mechanism and formation time to the remagnetization processes which took place in the northwest of Fennoscandia about 1.8 Ga during the Svecofennian orogeny. The corresponding geomagnetic pole of Fennoscandia is located in the immediate vicinity of the known Paleoproterozoic (1.9–1.7 Ga) poles of Baltica (Khramov et al., 1997; Veikkolainen et al., 2014). We also present the new geochronological Ar/Ar, Sm-Nd, Rb-Sr and U-Pb data which allow to determine the age of remagnetization as ∼1.86 Ga.

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