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Palaeomagnetism of the Riphean rocks from the South Urals

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After thermal amalgamation between 1.8-1.7 Ga the East European Craton (EEC) has diverse development at it's different parts. Several stages can be distinguished as marked by magmatic activity, deformation of the crust and the sedimentary rocks (Bogdanova et al., 2003). During Middle Riphean stage (1.4-1.2 Ga) rifting and passive margin have been formed in the east (Uralian) margin of Craton (Puchkov, 2000). However, the most part of the Middle Riphean palaeomagnetic data for EEC from Global Palaeomagnetic Database obtain from Fennoscandian rocks. There are practically now conditioned data from Russia. Palaeomagnetic studies on Middle Riphean magmatic rocks will be carried not in the eastern margin of EEC - at Bashkirian anticlinorium (the South Urals). The objects for palaeomagnetic investigations are: Satka sill complex, Bakal, Berdyaush, Radostniy and Gaev quarries. About 300 oriented samples were collected for palaeomagnetic analysis. The age of magmatic rocks (mainly dykes and sills) is 1341+-41 Ma (Rb/Sr method) and 1350+-30 Ma (U/Pb method). All samples was subjected to stepwise thermal demagnetization and some selected samples subjected to alternating-filed demagnetization. Principal component analysis reveal two consistent remanence vectors from the rocks. The first one is intermediate-temperature one-polarity component that conforms to the Late Paleozoic direction for the EEC. This components is present in all the sites investigated. The second component is a high-temperature dual-polarity characteristic remanence. The remanence has unblocking temperatures between 480C and 590C, approaching the Curie temperature of magnetite. We use the correlation modification of fold-test to identify the age of magnetization. According to the synfolding analysis, the magnetization was formed at the begging stage of folding (15-20%) for the most part of objects, and only for two objects - Satka sills and Bakal quarry at 30% of unfolding. If we accept the Middle Riphean age of folding (Rasulov, 2002; Fershtater et al., 2003), it's necessary to

conclude the primary origin of magnetization. Palaeomagnetic pole, recalculated from high-temperature component, suggest a low-palaeolatitude position for East European Craton at the Middle Riphean time.