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Paleomagnetism of the devonian basalts and redbeds at the bykovskaya straight (Mouth of lena river, eastern Siberia)

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Abstract

© SGEM2017. All Rights Reserved. We have collected paleomagnetic samples from Late Devonian (Fammennian) basalts and sedimentary redbeds at the Bykovskaya Straight (in the vicinity of Lena River delta). Most studied samples carried interpretable paleomagnetic signal. Three paleomagnetic components have been isolated: A+A', C, and D. The magnetization of the overwhelmed majority of Late Devonian samples from the Bykovskaya Straight has been reset by modern (or Late Cenozoic) geomagnetic field (component A+A'). The sole site was characterized by the presence of Late Devonian magnetization component in its samples. The virtual pole, calculated from this component, can be used (combined with other virtual poles) to determine the position of the Late Devonian pole for Siberian craton. Studied sedimentary rocks were characterized by the presence of a metachronous syn-folding component. The comparison of the correspondent pole with European reference Apparent Polar Wander Path permits concluding that the folding in the region took place during Middle-Late Jurassic (160-170 Ma).

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Keywords

Devonian, Jurassic, Paleomagnetism, Remagnetization, Siberian platform

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