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AMS study of the evolution of the Middle-Late Ordovician sea basin in the North of the Siberian platform

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Anisotropy of the magnetic susceptibility (AMS) in the sedimentary rocks may be largely determined by hydrodynamic forces et, hence, by the velocity and by the directions of currents of the medium in which the detrital grains are being transported and deposited (Tarling and Hrouda, 1993). Thus, AMS measurements can provide us with information about the hydrodynamics of sedimentary basins and its evolution over time. In this report, we demonstrate AMS data that were obtained from the upper part of the Ordovician strata which are exposed in the middle reaches of the Moyero River (Northern Siberia, south of the Anabar uplift) and include the rocks of the Volginsky, Kirensko-Kudrinsky, Chertovsky, Baksanian and Dolborian regiostages. The rocks under study were formed within a vast shallow marine basin that covered a significant part of the Siberian Platform in the Ordovician, so our AMS data may have application for understanding the paleogeography and hydrodynamics of this basin and its evolution. Analysis of the distribution of the axes of magnetic anisotropy indicates that a significant reorganization of the sedimentary basin took place in the middle part of the chertovskian (Sandbian) time.