

## Cretaceous tectonic reconstructions of the High Arctic in the global plate kinematic framework

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Due to the last years intensive scientific campaigns, the High Arctic is now better covered with modern geophysical and geological data which reveal even more than before the complexity of this remote area. The opening of the North Atlantic ocean give us first order information about the motion between the North America and Eurasia plates, whose shared plate boundary runs through the Arctic region. According to this model, an episode of tectonic quiescence is predicted for the Aptian-Albian time, contemporaneous with postulated phases of large igneous province formation. Here we are using new geophysical data for unraveling possible Arctic tectonic scenarios for the Aptian to Recent time.

Using geophysical data, sparse information from drilling wells, and geological data, a new tectonostratigraphic model has been established for numerous sub-parallel rifts in the Arctic Siberian shelf. We have interpreted an Aptian-Albian extension episode with west-east orientation in the Arctic Siberian shelf and have estimated  $\beta$ -factors for the extension in the North-Chukchi, East-Siberian and Anisian basin. The single rotation pole for the Cretaceous Normal Superchron is now replaced with few stage rotations based on geological constraints identified in the Siberian Shelf data. We also address the Campanian compressional episode in the Arctic predicted by the fast opening of the North-Atlantic. Since there are no evidences of compression in the Siberian Shelf, we discuss possible scenarios to explain the discrepancy. The study was funded by RFBR - projects № 18-35-00133 and 18-05-00495.