GEODYNAMICS OF THE CRUST OF NORTHEASTERN MARGIN OF EUROPE

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The sedimentary columns and geologic cross sections, the maps of depth to the basement and to the Moho boundary, the velocity discontinuities in the top of the basement, the velocities in the crust and in the uppermost mantle, the gravity and magnetic models of the crust were compiled to define the geodynamics for the Mezen Basin and Timan Pechora Province located in Russian portion of Northeast EuropeThe Mezen basin is the northeastern portion of the East European craton. Within the Mezen basin area, the accretion of microcontinents and formation of craton took place in Archean-Early Proterozoic (before 1700 Ma time boundary). Continental rifting was in Riphean, and sedimentary cover generated during postrift subsidence in early Vendian and continued in terms of platform regime after this.The Timan-Pechora province is the young platform in which the basement was completed during Riphean-Early Cambrian time, and unconsolidated sedimentary deposits accumulated since the latest Cambrian. In Riphean, the northeastern slope of the East-European craton, back-arc basin, volcanic arc massif and ocean just east from island arc are suggested in the area of recent Timan-Pechora province. From the end of Riphean to early Cambrian, the crust of the region was developed in terms of active collisional tectonics, which resulted in forming of Timan fold belt. From the late Cambrian to Cenozoic, basin formation took place, and was interrupted in the Middle Paleozoic by continental rifting.