

DEEP STRUCTURE OF THE CENTRAL BELARUS BELT: RESULTS FROM A GEOPHYSICAL -GEOLOGICAL INTEGRATION

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In Belarus, the EUROBRIDGE profile extends across one of the most important lithospheric discontinuities in the East European Craton, the Fennoscandia -Sarmatia junction zone. A 2.0-1.9 Ga Palaeoproterozoic terrane immediately adjoining the junction comprises the Central Belarus Belt (CB) and the Vitebsk Granulite Domain (VG). The major NE-trending Minsk Fault subdivides the CB into the northwestern and southeastern sub-terrains with contrasting styles of tectonothermal evolution. The EUROBRIDGE MT survey-95, EUROBRIDGE-96 DSS experiment and gravity data modeling show that the CB is characterized by complicated deep structure of the crust and anomalous physical rock properties (high P-wave velocity in the middle crust, high electrical conductivity at the depth of 20-30 km and different rock density in the northwestern and southeastern CB). The petrophysical data complemented by results of PT-work and interpreted seismic data indicate a multistage tectonic development of the CB related to subductional-collisional processes in the Palaeoproterozoic.