



Upper lithospheric structure in the central Fennoscandian shield: constraints from P- and S-wave velocity models and V_p/V_s ratio distribution of the BALTIC wide-angle seismic profile

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The presentation shows an analysis of the crust and upper mantle structure in the central Fennoscandian shield based on new P- and S-wave 2-D velocity models of the BALTIC wide-angle reflection and refraction profiles. Using reprocessed old data, new P- and S-wave velocity models and V_p/V_s ratio distribution were developed. Moving from SW to NE, the thickness of the crust varies strongly, from ~ 36 km to extremely large value of 58–64 km, while crossing the Wiborg rapakivi massif, Saimaa and Outokumpu areas, and Eastern Finland complex. Based on the lateral variations of V_p , V_p/V_s and thickness of the crust, three main blocks of the crust and upper mantle were distinguished from SW to NE, namely the southwestern block, associated with Wiborg rapakivi massif; the central block, having the highest thickness of the crust; and the northeastern block, not well documented, with the Archaean basement.