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By
Jørgen Torstveit (ed.)

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VI.5 Upper mantle heterogeneities beneath Eastern Europe

P-wave travel time residuals for seismograph stations in Eastern Europe as reported by ISC for the years 1964-77 were used for constructing a seismic image of upper mantle heterogeneities in the network region. For the depth range 0-100 km, dominant tectonic features like the Pannonian Basin and the Aegean Sea and Western Turkey correlate well with pronounced velocity lows which appear to extend down to a 300 km depth. The velocity anomaly patterns in the depth intervals 300-500 km and 500-600 km are broadly similar but quite different from those of shallower depths. The observed seismic heterogeneities are briefly discussed in terms of large-scale tectonic and geophysical (heat-flow) characteristics of Eastern Europe. A comprehensive description of this work can be found in a recent paper by Hovland and Husebye (1982).

J. Hovland, Univ. of Oslo
E.S. Husebye

Reference

Hovland, J. and E.S. Husebye (1982): Upper mantle heterogeneities beneath Eastern Europe. Tectonophysics, in press.