

СОСТОЯНИЕ ГЕОДИНАМИЧЕСКОЙ
**CONDITION OF GEODYNAMIC MOBILITY IN MANTLE BASED ON DATA
FROM SEISMIC TOMOGRAPHY AND P AND S WAVES VELOCITY RATIO**

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Algorithm of $\delta(V_p/V_s)$ attribute calculation was formulated and checked for existing global S and P waves mantle velocity variation models based on restore of absolute velocity values from variations and PREM model, which allows reducing noise contribution. Maximums of this attribute appear in the zones of increased partial melting or deep fluid supply and are interpreted as a factor of interior «mobility». Positive anomalies of mobility exist beneath the regions of recent volcanism in Eurasia up to depth of 1000 km. On latitudinal section high contrast lenses of the attribute are concentrated around two cone-like areas, expanding towards the upper parts of the mantle. These areas intersect with branches of African and Pacific superplumes. Main mobility within the limits of latitudinal section at recent volcanic areas of Russian Eurasia is supported by the flow, coming from superplumes with subequatorial roots. On the section along the Mid-Atlantic Ridge (MAR) in the mantle above 700 km we could observe the lenses of low mobility as thick as 200-300 km in areas of Romanche, 15°20' (Cape Verde), the Charlie Gibbs fracture zones and the Knipovich Ridge. These areas of «cold» mantle correlate with geochemical segmentation of the MAR and fracture zones that form the main Atlantic ocean segmentation and its transition to the Arctic region with large offset segments (from 180 to 1050 km) and left strike-slip morphology.

Keywords: velocity ratio, mobility, the Ocean Ridge, cold mantle blocks.