RIFTLIKE STRUCTURES AND MANTLE PLUMES ON THE TERRITORY OF CENTRAL ASIA

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Territory of Central Asia from Caspian Sea on the west to Tarim massif on the east, from Kopet-Dag and Pamir on the south to Karatau and Mugodjary on the north is covered by dense net of deep seismic sounding profiles, crossing main regional deep structures.Moho boundary is gently dipping from west to east-south-east from 28-45 km up to 60-85km. Within limits of large cratons (Karakum-Tadjik and Turgay-Middle Syrdarya) depth of Moho is changed from 32 to 48km. But in intermountain depressions (West Turkmenistan –28-40km, Karabogaz-Gol –30-35km, Bukhara-Khiva- 32-34 km, Zarafshan –34-36km, Aral-sea – 33-35km, Fergana-Issykkul-45-50km, Ghissar-35-40km, Alay 43-50km, South-East Pamir-65-70km) the depth of Moho is sharply variated. Depressions from both sides are terminated by deep faults, along them exists chains of positive magnetic and negative gravimetric anomalies, many thermal springs.Alpian faults, establishad by recent vertical displacements on the surface of Pre-Mezozoic basement, if they also characterized by minimal altitude (100-200m) are cutting the surface of upper mantle. Main part of Alpian faults is seismogenic. Although in limits of internal mantle plumes and riftlike structures besides anomalous thinning of earth crust are presented isostatic anomalies, wide development of ulkanogenic and intrusive formation, high level of seismicity (Alay, Ghissar, Gazli).On the south flank of Gazli ledge was established mantle overthrust sheet with velocity 8.35 km/s at the depth 19-22km with thickness 4 km and width 40km. The depth of normal Moho boundary underneath is equal 40 km with velocity 7.9 km/s.