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The transverse faults Vernadsky - Vema and Kane: the complex examination of seismology data and Bouguer gravity anomaly map

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We analyze particular features of the transverse faults of Mid-Atlantic Ridge (MAR): Vernadsky, Doldrams, Arkhangelsky, Vema (6°-11°N) and Kane (22°-25°N). Complex examination of seismology data, structures of the ocean bottom relief and Bouguer gravity anomaly map which reflects relief of the crust bottom allows to give a more precise definition to present transform faulting model by D.Wilson. To calculate Bouguer gravity anomaly map we use high precision ocean gravity measurements (up to 0,3-0,5 mgals). Positions of epicenters of earthquakes do not coincide with the forms of a relief however agree well enough with isolines orientation on Bouguer gravity anomaly map. Sub-meridian segments of MAR are practically aseismic in the considered regions. The majority of seismic events occur in faults zones; the focal mechanisms are practically pure strike slip with main axes of tension forces of NE-SW direction and pressure forces of NW-SE direction. The general analysis of the results shows that W-E structural features, which are commonly classified as transform faults, are actually greatly different in crustal structure. The two examined fault zones are similar in the sea bottom topography, but look absolutely different at the Bouguer gravity map.