



Please ensure that your abstract fits into one column on one page and complies with the Instructions to Authors available from the Abstract Submission web page.

Statistical estimation of the geophysical fields and basalt assemblages distribution in the Central Atlantic

L.V. DMITRIEV¹, N.S. SOKOLOV² AND S.YU. SOKOLOV³

¹Vernadsky Institute of Geochemistry RAS, Moscow, ldmitr@geokhi.ru

²Moscow State University, sns@tarkus.ru

³Geological Institute RAS, Moscow; geophys@ginras.ru

The calculation of K-means clusters for basic geophysical parameters (Bouguer and isostatic anomalies, heat flow, Love waves tomography on 35 s periods, bottom topography and thickness of sediments), indicating geodynamical state of oceanic crust and available at equal spacing on 1° grid was done. Distribution of clusters (fig.1) shows the presence of symmetry violation by plum diapirism and significant variance of conditions along ridge axis. The quantitative description of clusters (fig.2) shows, that strong value of deep heat flow is not responsible for main diversity of crust structures and occupies discrete positions on the ridge. These positions correlates with Spreading (SA) and Plume (PA) basalt Assemblages.

