RHYTHMICITY IN THE GLOBAL DEVELOPMENT OF MAGMATISM IN THE WORLD OCEAN

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Using an original technique of multifactor data aglomeration and modified petrochemical E.Klein & C.Langmuir barometer, we have obtained variations for general (planetary) depth level of basaltic magma separation from mantle diapirs in the World ocean. Cretaceous-Paleocene, Eocene-Oligocene, and uncomplited Miocene-modern rhythms are defined. The earliest rhythms' stages are characterized by a notable dispersion of the magma separation depths. At the rhythms' ending, the diapir rising level becomes a quasi-steady one. The latest stages correlate with decreasing of magnetic field inversion frequency, volcanism intensity at the oceans and continental platforms, with growing of continental platform depressions' intensity, and with the sea-water temperature drop. The rhythms' longevity and the differences between the earliest and latest stages are decreasing from the first to the third rithms. The rhythms are defined by composition dispersion of the most extended tholeiite group (without picritic and strongly differentiated varieties). Notable variations in composition of different-age tholeiites through oceans are common for the Cretaceous-Paleocene rhythm. During the Eocene-Oligocene rhythm their composition dispersion is minimal and exeptionaly homogenous for all the oceans. In the Miocene-modern rhythm, a composition dispersion notably increases and covers whole the range of ancient-tholeiites' composition. This work was supported by RFBR.