

# EFFECT OF VORTEX MOTION ON THE GEODYNAMICS OF THE AEGEAN SEA (BASED ON COMPARATIVE ANALYSIS WITH GEODYNAMICS OF THE WOODLARK BASIN)

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The geodynamics of the Aegean Sea as a back-arc basin is considered on the basis of a comparative analysis with the geodynamics of the back-arc spreading Woodlark basin (active margin of Eurasia). The paper shows that properties of vortex motion components are revealed in the kinematics and in the modern structure of the basin, as well as in the structure and evolution of the north-east and south-west (Cretan Sea) areas of the Aegean Sea. These include: rounded, vortex-like contours of both regions; change in planned geometry of basins within the north-eastern region (including the Marmara Sea basin) caused by the effects from stretch and shear components; compressive stresses in the closure of the vortex structure; tectonic layering of the crust; magmatism peculiarities. Thus, basins within the Aegean and Marmara seas form a single geodynamic system formed under the influence of the vortex component of the evolution.

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