O29. NUMERICAL SIMULATION OF MESO- AND SUBMESOSCALE FEATURES OF THE NORTH-WESTERNBLACK SEA SHELF CIRCULATION USING HIGH SPATIAL RESOLUTION

Natalia Evstigneeva[1], Sergey Demyshev[1]

[1]*Marine Hydrophysical Institute RAS.*
naevstigneeva@yandex.ru

A numerical experiment on reconstruction of currents was conducted with real atmospheric forcing data in autumn period of 2007 on the basis of Marine hydrophysical institute (MHI) hydrodynamic model, which was adapted to the coastal area of the Black Sea with an open boundary (north-western shelf). A high resolution (horizontal grid 500×500 m and 44 vertical layers from 1 m to 49 m) and detailed bathymetry with resolution ~1.6 km were used in the calculation. A higher spatial resolution allowed to get a detailed mesoscale and submesoscale structure of currents in the upper and deep layers of the north-western shelf and to obtain quantitative and qualitative characteristics of the eddies and jets more accurately in comparison with previous calculations.