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Objective analysis of geostrophic currents in the Adriatic Sea*

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The first results of the objective analysis of geostrophic currents in the Adriatic Sea are presented. Data collected during the „Andrija Mohorovičić" cruise in September and October 1974 are used for computing relative dynamic depths. These are then interpolated on a rectangular grid of points, using a first-order polynomial for approximating the mean depths, and applying both the isotropic and anisotropic autocorrelation functions. The objectively analyzed surface currents, computed relative to those at the 50 dbar surface, show a similarity with the results of subjective analysis only for the anisotropic autocorrelation function. It is concluded that detailed measurements are needed to assess the statistics of relative dynamic depths. Moreover, the problem of aliasing should be considered, and a method for transforming relative into absolute currents should be applied to the Adriatic Sea data.

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