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# VERIFICATION OF THE STREAMLET MODEL BASED ON VELOCITY MEASUREMENTS OF OCEAN CURRENTS

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## ABSTRACT

The aim of this study is at verification of a new velocity-based feature model, called streamlets proposed recently for objective analysis of the three-dimensional velocity structure of oceanic currents. This is a simple parametric model, which is based on the coherence of jet streams and eddies (synoptic features). As an universal model, streamlets allow to unite different functional synoptic objects. Assimilation of velocity measurements is accomplished by selection optimal parameters of an objective function using the well-known Nelder-Mead algorithm. Case studies present synoptic features of different origin and scale including surface-intensified and subsurface baroclinic examples, as well as deep barotropic ones.

**Keywords**: jet streams, eddies, feature modeling, vorticity, Lamb vector and surfaces.

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