



Coastal Ocean State Estimates and Forecasts based on HF Radar Data

E.V. Stanev, J. Schulz-Stellenfleth, J. Staneva, and J. Seemann

Helmholtz-Zentrum Geesthacht, Institute for Coastal Research, Geesthacht, Germany (emil.stanev@hzg.de, +49 (0)4152 87 1565)

Coastal Observing System for Northern and Arctic Seas (COSYNA) collects near real-time HF radar data, which are used in parallel with numerical models to provide continuously state estimates and coastal ocean forecasts. The forecasting suite includes nested 3-D hydrodynamic models running in data-assimilation mode, which are forced with an up-to-date meteorological forecast data. This paper reviews a new method focussed on intra-tidal time scales combining radial surface currents measurements from three HF radars in the German Bight with a priori information from the hydrodynamic model. The example provided in this study is considered as a step towards developing new coastal ocean products.