

## Sequential Data Assimilation with High-Frequency (HF) Radar Surface Current

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**Abstract :** The abundant measured surface current from HF radar system in coastal area is assimilated into model to improve the modeling forecasting ability. A simple sequential data assimilation scheme, Direct Insertion (DI), is applied to update model forecast states. The influence of Direct Insertion data assimilation over time is analyzed at one reference point. Vector maps of surface current from models are compared with HF radar measurements. Root-Mean-Squared-Error (RMSE) between modeling results and HF radar measurements is calculated during the last four days with no data assimilation.

**Keywords :** data assimilation, CODAR, HF radar, surface current, direct insertion

**Conference Title :** ICCOE 2014 : International Conference on Coastal and Ocean Engineering

**Conference Location :** Paris, France

**Conference Dates :** September 22-23, 2014