

The Study of SST Optimization Using Nudging Scheme in Data Assimilation Method (Case Study: the Persian Gulf)

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Abstract

In this paper, we investigated the capabilities of SST data assimilation methods into FVCOM model using nudging scheme. In Data assimilation, observational data was combined with the numerical model in order to get the optimum model. This process was achieved by correcting the model errors for two purposes: first to optimize the desired variable and second to present the optimized initial condition for model. The studying domain was the Persian Gulf during 1998-2003. The model was run in two stages with the same setup: without and with assimilation method. To assess the impact of data assimilation, the model results in both runs were compared with valued OISST data in spatial distribution and temporal evaluation. The statistical parameter values were improved by using data assimilation. The surface temperatures of shallow parts were optimized specially near the Strait of Hormuz.

Keywords: *Data assimilation, Nudging, SST, OISST, FVCOM, Persian Gulf.*
