ROMS-OSOM: Data Assimilation and Forecasting Capabilities

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Previous work has shown that the Regional Ocean Modeling System (ROMS) component of the Ocean State Ocean Model (OSOM) is adequately prepared for forecasts of the physical circulation within Rhode Island's primary oceanic waterways, including the Narragansett and Mount Hope Bays (along with the larger rivers feeding them), the Rhode Island and Block Island Sounds, and possibly beyond. This work presents the current progress in achieving a forecast-ready ROMS-OSOM setup, including the system designed to gather historic and real-time forcing information, the data assimilation scheme for nudging the model according to in-situ observations, forecast and reanalysis metrics and workflow, and future directions for the ROMS-OSOM system.