Introducing the ROMS-JEDI Interface (Poster)

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The integration of ROMS into JEDI is introduced as an alternative approach for advanced data assimilation. Adjoint-based algorithms have been available in ROMS for over a decade (Moore *et al.*, 2004; 2011a, b, c; 2013; 2017). ROMS also supports the Ensemble Adjustment Kalman Filter (EAKF) (Moore *et al.*, 2020) through its interface with the DART system (Anderson *et al.*, 2009). Since 2022, all core C++ and Fortran-2003 components for OOPS, SABER, IODA, and UFO have been implemented and tested with regional applications on the US West and East Coasts. The ROMS-JEDI interface is presented as an additional tool for variational data assimilation methods, including 3D-Var, hybrid 3D-Var, 3D-FGAT, 4D-Var, and hybrid 4D-Var.

DART	Data Assimilation Research Testbed
IODA	Interface for Observation Data Access
JEDI	Joint Effort for Data Assimilation Integration
OOPS	Object-Oriented Prediction System
ROMS	Regional Ocean Modeling System
SABER	System-Agnostic Background Error Representation
UFO	Unified Forward Operator
YAML	YAML Ain't Markup Language