



## Early Assessment of JEDI Standalone Ocean Analyses Versus NASA's GEOS-S2S Results

NASA's Global Modeling and Assimilation Office (GMAO) is in the process of transitioning the data assimilation (DA) system for its Goddard Earth Observing System Subseasonal-to-Seasonal (GEOS-S2S) forecast system to the Joint Effort for Data assimilation Integration (JEDI) system maintained by the Joint Centers for Satellite Data Assimilation (JCSDA). JEDI's ocean-focused component is Sea-ice, Ocean, and Coupled Assimilation (SOCA). In this early phase of the transition, a standalone ocean analysis is performed using SOCA's three-dimensional variational (3DVar) DA algorithm on backgrounds and observations from a run of the soon-to-be-released GEOS-S2S version 3, which uses an Ocean Data Assimilation System (ODAS) that implements a modified version of the Local Ensemble Transform Kalman Filter (LETKF) with a 5-day cycle for the ocean. The SOCA 3DVar analyses are compared to GEOS-S2S v3 ODAS analyses during a period which includes a wide variety of satellite and in-situ observation sources of various types, including sea-surface temperature (SST), sea-surface salinity (SSS), absolute dynamic topography (ADT), and temperature and salinity profiles.

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