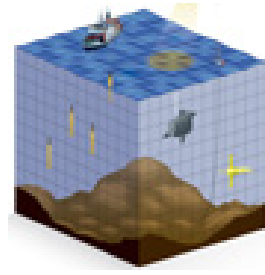


Joint ECMWF/OceanPredict workshop on Advances in Ocean Data Assimilation



Contribution ID: 4

Type: **Oral presentation**

Assimilating wide-swath altimeter observations in a high-resolution shelf-seas analysis and forecasting system

Tuesday, 18 May 2021 14:00 (20 minutes)

The impact of assimilating simulated wide-swath altimetry observations from the upcoming SWOT mission has been assessed using Observing System Simulation Experiments (OSSEs). This mission has the potential to bring about a step change in our ability to observe the ocean mesoscale, but work to ameliorate the effects of correlated errors in the processing of the SWOT observations and the assimilation is likely to be crucial. Our experiments use the Met Office 1.5 km resolution North-West European Shelf analysis and forecasting system. In an effort to understand the importance of future work to account for correlated errors in the data assimilation scheme and to reduce the magnitude of these errors in the observations themselves, we simulated SWOT observations with and without realistic correlated errors. These were assimilated in OSSEs along with simulated observations emulating the standard observing network, also with realistic errors added. We will discuss the potential impact of assimilating SWOT observations and the effectiveness of simple measures to reduce the impact of the large correlated errors expected with this instrument.

Which theme does your abstract refer to?

Assimilation of novel observations (i.e. under-utilized observations and upcoming missions)

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Session Classification: Theme 6: Assimilation of novel observations

Track Classification: Assimilation of novel observations