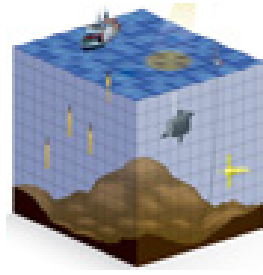


Joint ECMWF/OceanPredict workshop on Advances in Ocean Data Assimilation



Contribution ID: 30

Type: **Oral presentation**

Invited talk: Impact assessment of satellite observation in the Mercator Ocean global 1/12° system

Tuesday, 18 May 2021 13:30 (30 minutes)

The use of ocean reanalysis and forecasts become more and more common for a large variety of applications. Requirements from the users are toward a higher resolution, leading to model increased resolution and complexity to better represent a larger spectrum of ocean phenomenon. In parallel, ocean observing systems also evolve to better capture smaller scale and higher frequency ocean features.

To benefit from new ocean observations and model evolution, developments are made in the system to better control the meso-scale dynamic and the ocean surface and mixed layer variability. Impact assessment studies are regularly conducted with new observation data sets or improved ones. We will present and discuss the ongoing effort to improve the efficiency of high resolution observation data assimilation on the global Mercator Ocean system at 1/12°. The talk will focus on satellite observations: sea level, including the MDT, sea surface salinity but also sea ice. It was also shown that the physical observation data assimilation has an impact on tracer transport that can be visible on particle trajectory or nutrients and then impact the BGC forecasts. Such indirect diagnostics will also be presented when assessing the impact of physical observations as they give a complementary view to usual statistical innovation based diagnostics.

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