Joel
Dorandeu
Mercator Ocean
Oral
Operational ocean analyses highly rely on satellite altimetry observations. The sea level height integrates information over the whole water column. As the numerical model physic and resolution improves, the need of accurate and high resolution observation array appear to describe the mesoscale variability. Characterization of the sensitivity of ocean analyses to the SLA observations is an important issue. Different approaches are developed at Mercator Ocean to assess the impact of the sea level observations on the analysis and also insure a proper use of the observations.

Dedicated experiments, such as Observing System Evaluations (OSE) and Observing System Simulation Experiments (OSSE) allow precise estimation of the impact of observations. Such experiments are carried out to assess the impact in our analysis of the current and future altimeter constellation and instrumental changes (error reduction, drifting orbit altimeter observations, large swath altimeter). Studies can be performed at global and regional scales. Those approaches are illustrated with the ongoing studies.

The quality of the operational analysis highly relies on the altimetry constellation. The SARAL mission has been recently launched and already delivers highly valuable data. The AltiKa SLA have been successfully assimilated since the end of July: the observation misfit is consistent with the Jason2 observations. Further evaluation is still needed but the first assimilation results in the Mercator Ocean global 1/12° system are very encouraging. It is a meaningful example of quick and efficient data production and delivery by space ground segments. These data could then be assimilated quickly by ocean models, which is important in the context of operational oceanography
OSTS session
Near Real Time Products and Applications and Multi-Mission, Multi-Sensor Observations
Download to PDF