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The purpose of along-track space filtering applied to Sea Level Anomalies (SLA) currently distributed through AVISO and MYOCEAN is two-fold: (1) removing the non-oceanic small-scale signals (error, noise) and (2) keeping ocean dynamics that can be monitored by the satellite constellation. If it is suited for computing afterwards maps of SLA over the global ocean, it is clearly too radical for applications focused on (sub)mesoscale dynamics. We propose here to revisit the along-track filtering applied to SLA by using spectral analysis to determine the reachable length scales

After a short status on the current filtered SLA products, this paper will focus on the small-scale errors contained in the raw SLA (1hz). A new specification of filtering cut-off length to reduce these errors and access (sub)mesoscale dynamics will be detailed as well as an estimation of the remaining error to be prescribed in data assimilation systems that will use this new data.

OSTS session

Quantifying Errors and Uncertainties in Altimetry Data Download to PDF