

Discussion Points for ERR Splinter Session

Quantifying Errors and Uncertainties
in Altimetry Data

Ocean Surface Topography Science Team Meeting (OSTST)

21-25 October, 2019

Chicago, Illinois



Oral presentations and posters

Quantifying Errors and Uncertainties in Altimetry Data

Oral:

- **14:00 - 14:18:** Uncertainties in sea ice thickness products from altimetry. Towards new methods: garnier florent et al. 5 / 259
- **14:18 - 14:36:** A new way to assess and represent the error budget for any altimeter mission: Pierre Thibaut et al.
- **14:36 - 14:54:** Harmonizing the Jason-1, Jason-2, Jason-3 Time Series of Altimeter Rain Flags: Matthieu Talpe et al.
- **14:54 - 15:12:** Lessons learned from Sentinel SARM missions in preparation of Jason-CS : Matthias Raynal et al.
- **15:12 - 15:30:** Improving the DAC de-aliasing model by combining with sub-monthly GRACE gravity data : Jennifer Bonin et al.

Poster:

- **ERR_001:** On denoising satellite altimeter measurements for high-resolution geophysical signal analysis: Yves Quilfen et al.
- **ERR_002:** Daily harmonics of ionospheric Total Electron Content and implications for single-frequency altimeters: Richard Ray

Issues to be addressed

Quantifying Errors and Uncertainties in Altimetry Data

1. Need for systematic (and rigorous) uncertainty estimations, need for agreed formalism

- Standard uncertainty formulation: drifts, calibration/Validation results, climate signals
- Input for applications:
 - Assimilation into ocean models,
 - Climate studies: MSL close out budget,
 - Some gaps to fill: variance/covariance matrix of Orbit Errors and MWR WTC for, e.g. local MSL trend estimates

2. From Science Team: Stability of Sentinel-3

- A stability issue has been identified in the Sentinel-3A altimeter. What cal/val and instrument processing studies should be conducted in advance of Sentinel-6/Jason-CS? Sentinel-3A could be a good testbed for these studies.
 - Error formalism to be proposed and adopted to estimate drift impact and corrections.
 - Each drift impact study or correction should then be presented according to this formalism

3. Is the poor involvement of the user community (e.g. from assimilative systems) in ERR splinter representative of low user interest in the OSTST? And why?

- Which forum should we target? Ocean, Hydro, Climate, etc. communities
- How to make them contribute, then report (feedback) in OSTST