

Regional and Global CALVAL for Assembling a Climate Data Record



Pascal Bonnefond, Shailen Desai, Bruce Haines, Eric Leuliette and Nicolas Picot— Fri 9:00 to 12:30

- How to best expand the footprint of "point calibration" to support demands of high-resolution (SAR / SWOT) and swath altimetry?
 - The reach of the dedicated sites is expanding, providing an early example for monitoring at higher spatial resolutions.
 - Various in situ technologies, e.g., GNSS buoys, are being explored by various groups for applications to future missions.
- How to better reconcile results from in situ sites with global analysis, in view of geographically correlated errors and coastal effects?
 - Important to understand the progress on the challenges of mm-level CALVAL has been significant
 - Better integration of global and regional analysis; improved coordination and comparison of results well in advance of OSTST.
 - Capitalize on improved performance of altimeter systems in coastal regions to better understand site specific errors in the context of appropriate error budgets.
- How to best apply standards?
 - FRM4ALT provides a template for understanding error contributions; should also help inform which processes are suited for standardization
 - Consider standards/requirements for higher-level products (e.g., surface currents from SKIM)

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- How to better intercompare for tide gauge calibrations?
 - Recognize the value in diversity of approach as well as the duality of tide gauge/altimeter comparisons (e.g., the altimeter data from the emerging constellation can also be used to understand the tide gauge performance).
- How to meet ever-increasing demands for accuracy at a wide-ranging spatial and temporal scales?
 - Continue to GNSS equipped buoy technology and understanding of associated systematic error sources.
- How to reconcile traditional in-situ measures of ocean state (e.g., dynamic height) with geodetic observations (sea level) in the presence of geoid signals and technique errors?
 - This is reasonably well understood in shallow seas (e.g., Bass Strait) but deep water applications require further exploration
- How to relate SWOT/SKIM measurements to oceanographic properties at scale relevant to the mission requirements?
 - Capitalize on diversity of techniques and observations: e.g., altimeter constellation, inland water monitoring, tide and lake gauges, transponders, hydrographic moorings, bottom pressure, GPS buoys and carpets, current meters, etc., to better expose errors and inform future observing programs.
 - Improve understanding of SWH variability and impact on interferometric measurements.