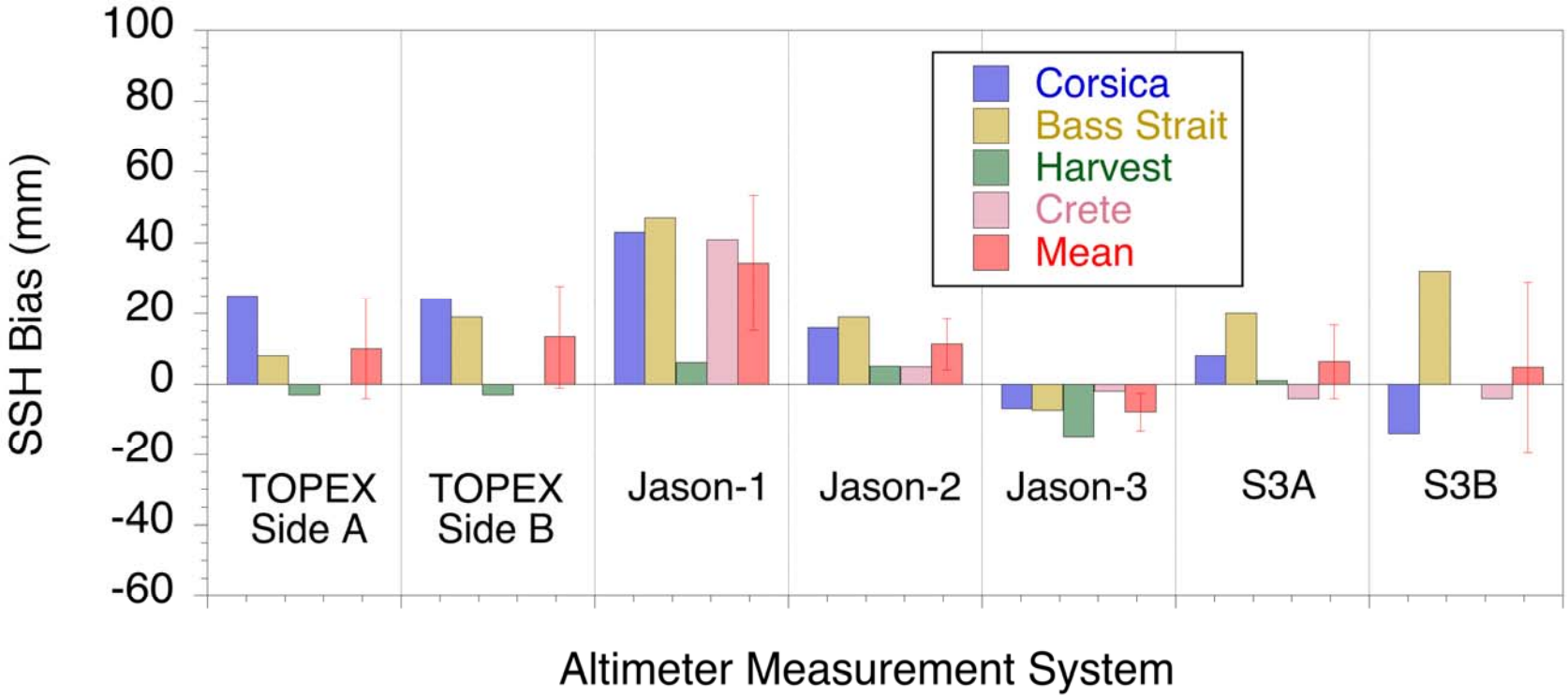
Current Results from Dedicated Calibration Sites

Compilation of Absolute SSH Bias Estimates *(Bonnefond et al., Watson et al., Haines et al., Mertikas et al., Cancet et al.)*



Some Highlights from the Oral Sessions

- Preliminary results from TOPEX re-tracked data highly encouraging: impact on climate record needs assessment by different means and independent PI's *(Talpe et al., Haines et al.).*
- State of the art in-situ technologies—e.g., tide gauges, transponders, GPS buoys, ADCP, moorings, profilers—hold significant promise for meeting increasing CAL/VAL demands of current and future missions *(Mertikas et al., Watson et al., Bonnefond et al., Haines et al.)*
- Jason-3 drift statistically indistinguishable from zero *(Leuliette et al.)*
- Studies confirm high quality of Sentinel 3 altimetry, but tide gauge comparisons show a SAR mode drift for S3A, in part from the processor change in early 2019: reprocessing (by end of 2020) should compensate *(Lucas et al., Leuliette et al.)*
- Promising results from Chinese Hy-2B satellite (launched October 2018), with low level of noise on range, and especially SWH *(Labroue et al.)*
- New SARAL/AltiKa (GDR-F) products promise significant positive impacts over ocean *(Jettou et al.).*
- Data from CryoSat (launched 2010) complement the ocean altimetry record from repeat-track missions: new products are ready for oceanographic studies and applications *(Banks et al.)*

Posters: Diverse Analyses Covering Many Missions and In-Situ Techniques

- *CVL_001 – Cancet et al., Regional in situ CalVal of Sentinel-3 altimeter range at non-dedicated sites*
- *CVL_002 – Legresy et al., CWPIES, a shallow water current, waves and pressure inverted echo sounder for higher resolution satellite altimetry calibration and validation.*
- *CVL_003 – Dodge et al., In Situ Measurements for Satellite Altimeter Calibration and Validation using LiDAR Systems*
- *CVL_004 – Schlembach et al., Round robin assessment of radar altimeter LRM and SAR retracking algorithms for significant wave height.*
- *CVL_005 – Raynal et al., Improving Conventional Altimetry SSH observability: Global assessment of SSH datasets derived from innovative LRM retrackers*
- *CVL_006 – Dettmering et al., Assessment of Sentinel-3A/B ocean data sets: Recent results of DGFI-TUM's multi-mission cross-calibration*
- *CVL_007 – Talpe et al., Results from Independent and Inter-Satellite Calibration and Validation of Jason-3 and Jason-2*
- *CVL_008 – Roinard et al., Jason-2 mission performance*
- *CVL_009 – Roinard et al., Jason-3 mission performance towards GDR-F*
- *CVL_010 – Roinard et al., Assessment of the last TOPEX SideB reprocessing*
- *CVL_011 – Naeije et al., CryoSat-2 Long-term Ocean Data Analysis and validation*
- *CVL_012 – Legeais et al., The Altimeter Sea Level Climate Data Record in the Copernicus Climate Service (C3S)*

Vibrant Discussions!

- Radio frequency interference from the 5G spectrum on the 23.8 GHz radiometer channel. (Will there be challenges to the dedicated cal/val sites?)
- In light of the Sentinel-3A altimeter stability issues Sentinel-3A cal/val studies should conducted in advance of Sentinel-6/Jason-CS?
- S6/JCS Reprocessing Plan (More frequent reprocessing)
- Jason-3 orbit after Jason-CS-A/Sentinel-6A commissioning (Interleaved versus geodetic. Other suggestions?)
- The Future of the OSTST

- How to best expand the footprint of "point calibration" to support demands of high-resolution and swath altimetry?
- How to better reconcile results from in situ sites with global analysis, in view of geographically correlated errors and coastal effects?
- How to meet ever-increasing demands for accuracy at a wide-ranging spatial and temporal scales?
- How to reconcile traditional in-situ measures of ocean state (e.g., dynamic height, bottom pressure, current from meters) with geodetic observations (sea level) in the presence of geoid signals and technique errors? How to relate SWOT measurements to oceanographic properties at scale relevant to the mission requirements?