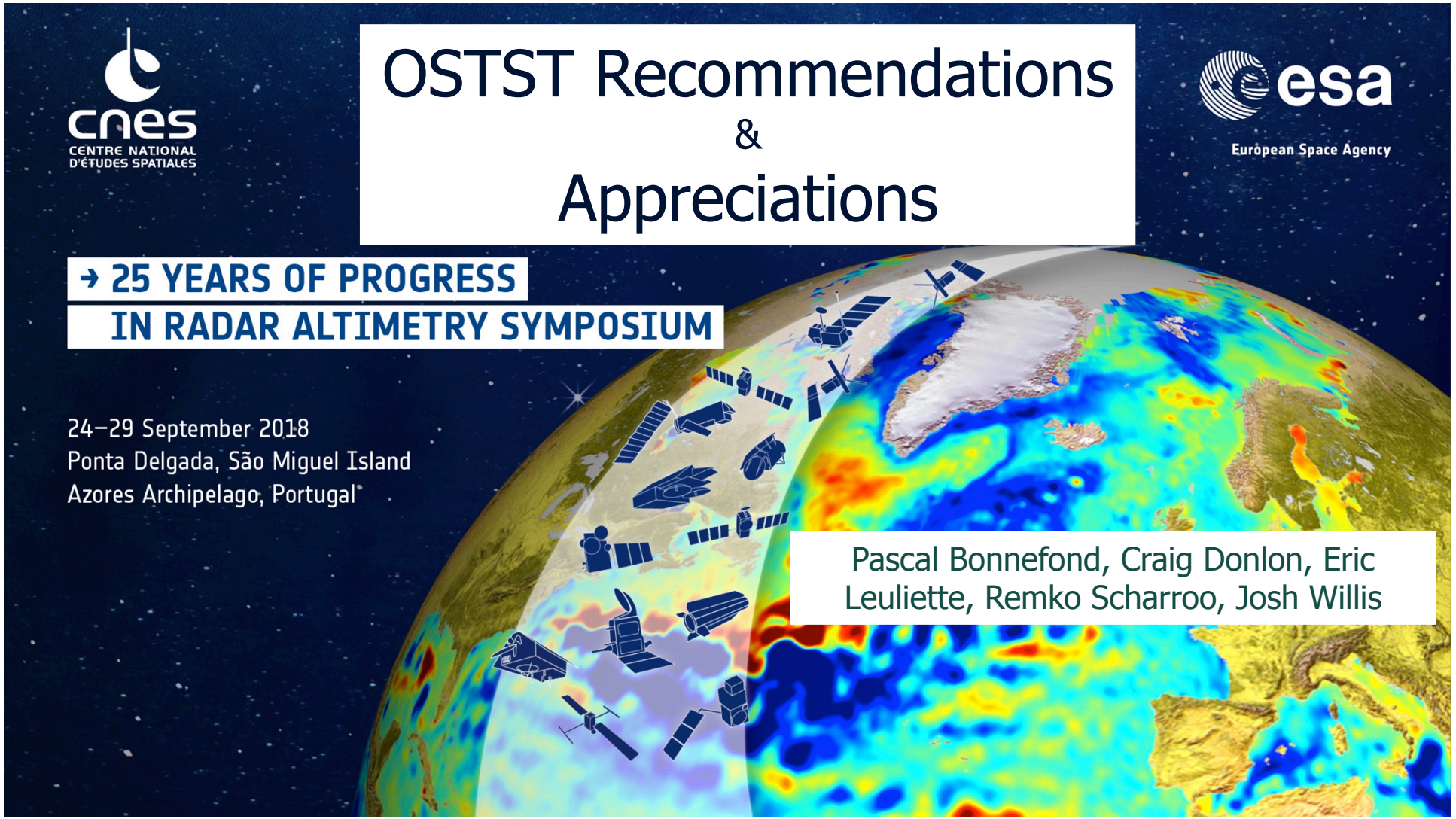
OSTST Recommendations & Appreciations



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OSTST expresses its appreciation…

- …for maintaining the launch schedule of Sentinel-6/Jason-CS, to overlap with Jason-3 during its nominal lifetime.
- …for the successful implementation of the Sentinel-3A & B tandem phase, as recommended by OSTST.
- …for excellent management of the gyroscope issue and ongoing operation of Jason-2, which continues to extend its scientific and operational output.
- …for ongoing work to reprocess the TOPEX data, which anchors the global mean sea level record, and for archiving and releasing of all information needed for reprocessing.
- …to the agencies for continuing to improve and develop the next generation of satellites with extended capabilities compared to conventional altimetry (e.g., SKIM, SWOT, PICE).
- …for timely launches of GRACE FO, ICESat-2, and CFOSAT.
- …for ongoing work and maturation of inland water and cryosphere studies using altimetry.

OSTST Recommendations

- Recognizing the ongoing importance of Jason-2 and SARAL/AltiKa for operational oceanography and improvement of the marine geoid, the OSTST recommends that operation of these missions be continued beyond 2019.
- To support higher resolution of the mean sea surface and geoid for upcoming missions like SWOT as well as operational oceanography applications, the OSTST recommends that Jason-2 should complete an additional interleaved ground track, 2 km offset from its current orbit
- Recognizing the ongoing importance of CryoSat-2 for contribution to sea level measurements, oceanography, observations of the cryosphere and inland waters, especially at very high latitude, and recognizing its role as an explorer for SAR altimetry, the OSTST recommends operation be continued beyond 2020.
- The OSTST recommends that the Sentinel-3 series missions continue to perform — during commissioning — tandem phase operations between successive missions (ie. C and D units) for inter-calibration, as was performed between Sentinel-3A & B.
- The OSTST recognizes the importance of future missions such as SKIM, which will provide unique opportunities to investigate direct measurement of surface currents and support the work of OSTST.
- Because of rapid climatic changes at the poles and the importance of missions like CryoSat-2 for observing these changes, the OSTST recommends a long-term commitment to full Arctic coverage altimetry in support of its objectives.

Proposed Recommendations by the OSTST suggested by the OSTST POD Team

- Recognizing the 8 – 10 mm orbit accuracy on the Jason series and Sentinel-3 series of missions, the OSTST recommends that future oceanographic altimeter missions embark three independent precision orbit determination instruments: DORIS (Doppler Orbitography and Radiopositioning Integrated by Satellite), GNSS (Global Navigation Satellite Systems), and a SLR (Satellite Laser Ranging) to achieve orbit accuracy sufficient to calculate key climate variables such as sea level change, and to allow for independent verification of that accuracy.
- Recognizing the need for a stable, and reliable Terrestrial Reference Frame (TRF) to maintain the integrity of key climate observations such as sea level change, and for high-quality near-real time products, the OSTST recommends that geodetic, space, and operational agencies maintain and improve the geodetic infrastructure, and continue to advance the precision and quality of space-based geodesy techniques including SLR (Satellite Laser Ranging), DORIS (Doppler Orbitography and Radiopositioning Integrated by Satellite), GNSS (Global Navigation Satellite Systems), and VLBI (Very Long Baseline Interferometry).