OSTST Recommendations

Jason-CS – LRM/SARM

1. The OSTST strongly recommends that the Jason-CS altimeter shall deliver both backward-compatible ("LRM") and high-resolution ("SAR") range measurements over all the ocean, seamlessly and simultaneously.
2. Backward compatibility will ensure continuity of service in operational oceanography, climate, and wind & wave applications.
3. The high-resolution data will enable sampling of sub-mesoscale features associated with high-velocity currents, vertical flow and mixing in the ocean. These will benefit both the operational and research communities.

Jason-CS – LRM/SARM

4. To enable near-real-time applications, LRM (at least) and SAR (if feasible) shall be delivered with latency similar to that in previous Jason missions.
5. Land and inland water applications shall be enabled to the fullest extent possible under the constraint that sea level measurement must be the primary mission.

Jason-CS - Radiometer

- **Recommendation 1: The main improvement the OSTST community could expect from the Jason-CS radiometer(s) is instrument enhancements to enable long term stability from the radiometer, eliminate dependence on ancillary data sources and reduce the latency of the final calibrated product.**

- **Recommendation 2: The Jason-CS system will benefit significantly from a three-frequency radiometer by reducing variance in the tropospheric path delay correction and maintaining continuity with the 20+ year record.**

- **Recommendation 3: The most significant benefit from the embarkation of a second radiometer would be for the second radiometer to operate at high frequencies to resolve km-scale water vapour to improve coastal~~ly~~ altimetry and inland hydrology applications.**

Recommendation - 2011 Meeting

- **the OSTST further recommended that ESA and the CryoSat-2 Project make all efforts to:**
  - **Allow distribution of currently generated value-added science products made on a free and open basis.**
  - **Provide a global seamless product over the ocean (LRM & SAR regions) as soon as possible.**

OSTST Recommendations

- The OSTST greatly appreciates the efforts made by ESA to allow the inclusion of CryoSat-2 data in the operational products such as DUACS and NOAA's wind/wave service since the 2011 meeting.
- In order to provide better feedback to the CryoSat-2 Project on CryoSat-2 ocean data, we recommend that level 2 data products based on LRM, SAR and SARIN that have been reprocessed by ***all parties*** be made available to the broader community.
- We hope that SARM data (raw telemetry, FBR and retracked data) be made available to experts in the OSTST in order to prepare for future SAR missions like Jason-CS and SWOT. Such data will also help to understand 10 to 100 km scale features in existing altimeter observations.

OSTST Recommendations

- **<u>Sentinel-3</u>**

  Several presentations during the Venice symposium and OSTST showed the potential of SAR altimeter for oceanography. Moreover, there were many discussions concerning the risk of discontinuity between LRM and SAR mode (see Jason-CS recommendations). As a result, **noting the potential benefits of SAR mode data to improve the precision and resolution of the measurements for all ocean applications, the OSTST recommends that the area of Sentinel-3 SAR altimeter acquisitions be maximized over the ocean to include all open ocean, coastal regions and marginal seas**.

OSTST Recommendations

- The Jason-1 geodetic mission has proven valuable for both oceanographic and geophysical applications. We recommend continued operation for as long as is feasible.
- The Jason-2 mission continues to provide crucial observations for oceanography, climate and operational applications. We recommend continued operation for as long as is feasible.

OSTST Appreciations

- We are grateful for the selection of the Jason-3 Launch Vehicle and stress the importance of maintaining the December 2014 launch date in order to preserve the continuity of the sea level record.
- We are also grateful for the advance of Jason-CS mission definition and notably the issues raised (altimeter and radiometer) that can lead to very important improvements for such a reference mission.
- We are pleased that the launch date for AltiKa has been set at 12/12/12.
- We also want to express our appreciation to the National Satellite Ocean Application Service (NSOAS) for the effort made on the communication of the quality of HY2-A data and for the advances made in the data policy to provide ~~to~~ the scientific community with such an important data set.
- We are also pleased that SWOT has passed MCR, and development is on pace for a 2020 launch. 😀