

Application development for Operations

Overall OSTST questions from Eric Leuliette

If people in the group have no opinion on these, we can just report that the applications group has no opinion. Should any of these be removed as not pertinent to the application group?

1 – Are our cal/val methods sufficient to verify the Jason-CS/Sentinel-6 global and regional mean sea level stability requirements?

2 – Considering the possibility of switching on the redundant altimeter on JCS/S6 during the cal/val phase with Jason-3. If feasible, what is the number of cycles that the redundant altimeter should operate?

3 – Alternative processing approaches such as fully-focused SAR processing are emerging. Will the current Sentinel-3 and Jason-CS/Sentinel-6 systems allow for novel processing approaches to be fully exploited?

4 – What would be the impact of descopeing MLE3 fields in the baseline for JCS/S6 products (except for sigma0)?

5 – Would increasing the frequency of the Jason-3 AMR cold sky calibrations to improve the long term stability?

6 – What are the open issues that affect the continuity between LRM and SAR modes from SWH, roughness, swell and their impacts on SSH?

7 – What areas should S6/JCS RAW SAR data (non-RMC) be collected (acquisition mask)?

Questions posed by the applications group for roundtable discussion:

1. How do we optimize Jason-2 operations for Near Real Time Applications?
2. Are there preferences for operation of Jason-2 in the future? The satellite orientation relative to the sun can lead to cooling the gyros. If the orientation is changed, the WVR accuracy is expected to be degraded, though the probability of safeholds may be reduced. If the orientation is not changed, there is no degradation to the WVR, though safehold events will not be reduced.
3. Is the improvement achieved on the accuracy of Sentinel-3 NRT orbit (1.3 cm average radial difference compared to the MOE orbit) recommendation for the future missions?
4. What are the improvements in assimilating data from upper level processing (L2, L2P, L3) into forecast systems and for what reasons?
5. What effort should be done for improving the NRT data for being incorporated into forecast systems? Are there additional demands on the NRT data in terms of contents, format, performance, dissemination?
6. What are the limitations of the NRT data as produced and delivered?
7. The typical requirement is to have 2 to 4 altimeters in operations for OGCMs. Is there any change in this requirement? What would be requirements for future models or for cyclone predictions or waves? Do they need more or fewer altimeters?
8. To compliment altimeter data, what additional observations are most valuable?

9. What can be accomplished in the coming year toward applications of SWOT, understanding ocean processes that may affect applications, and how the results may reflect on SWOT cal/val.