Aquarius Calibration Sub-Group Summary Report

11/15/2011

Objectives

1. Determine initial static calibration coefficient adjustments and provide recommendations at November cal/val meeting
   - TND coefficients, front end path loss coefficients, APC coefficients

2. Assess residual time variability of radiometer calibration and suggest time dependent calibration coefficients (if needed) to remove by the November meeting
   - Recommend to the project the method for doing this (e.g. build it into the software or reply on post processing)
   - Recommend time dependent correction

3. Develop a plan for assessing the need for and implementing future calibration updates

Objective 1

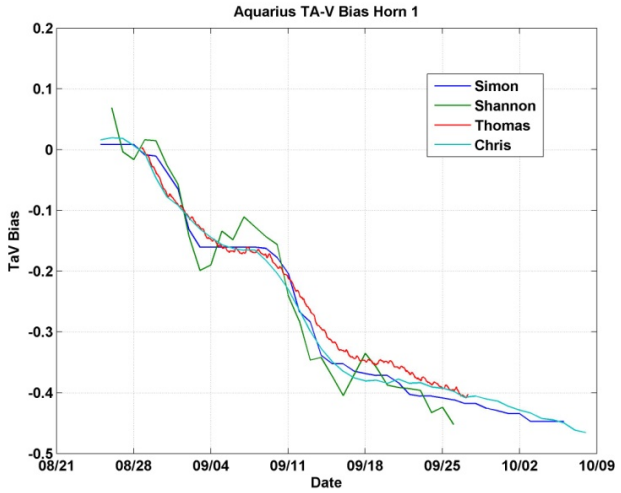
1. **Determine initial static calibration coefficient adjustments and provide recommendations at November cal/val meeting**
   - **V1.1 initial adjustments made to TND – largest adjustment at V-pol**

- **V1.3 adjustments should be made using ocean biases and cold sky biases to adjust gain/offset terms**
  - **See Emmanuel's presentation for cold sky analysis**

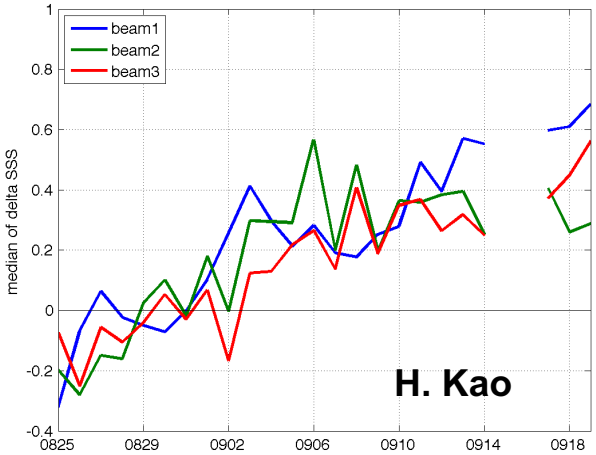
L2 V1.1 Cold Sky Minimum TAs	V-pol	H-pol
Horn 1	2.7 K	4.7 K
Horn 2	0.9 K	4.0 K
Horn 3	-1.1 K	5.5 K

Objective 2

2. Assess residual time variability of radiometer calibration and suggest time dependent calibration coefficients (if needed) to remove by the November meeting
   - Ocean biases consistent between different groups; drift also apparent in AVDS comparisons
   - V1.2 method implemented to remove 7-day running average of the TA bias w.r.t. TA expected



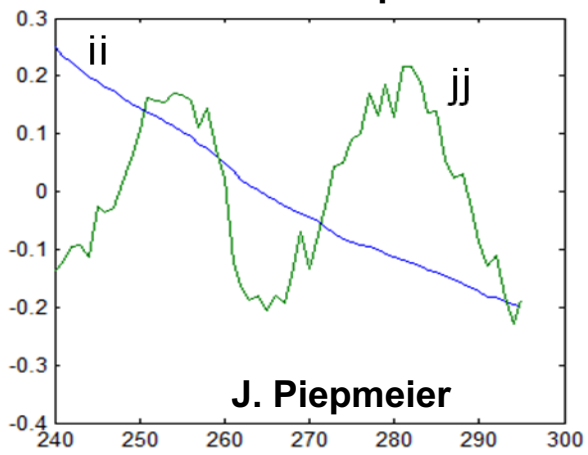
Aq SSS – In Situ



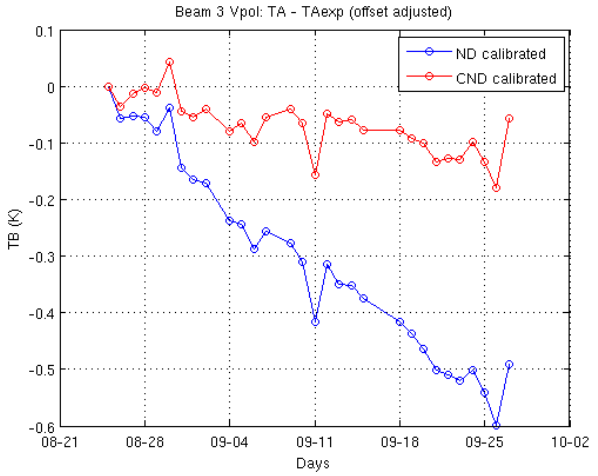
Objective 2

2. Assess residual time variability of radiometer calibration and suggest time dependent calibration coefficients (if needed) to remove by the November meeting
   - J. Piepmeier showed TA-TAsim drift components present in ND ratios
   - S. Misra showed drift with CND calibrated TAs significantly reduced
   - Correction approaches constrained by ND ratios being investigated

ND ratio drift components



TA with CND and ND calibration



Objective 3

3. Develop a plan for assessing the need for and implementing future calibration updates

Recommendation for Cold Sky observations (how often, when?)