

**Aquarius Calibration / Validation (Cal/Val) Workshop**  
**Held at Remote Sensing Solutions (Santa Rosa, CA)**  
**March 29 - 30, 2016**

**Overview/Introduction**

- Overview and Meeting Objectives: (G. Lagerloef, S. Brown)
- Review of V5 development schedule and milestones (G. Lagerloef, S. Brown)
- Brief review of V1 to V4 algorithm evolutions

**Topic 1: Analysis of Residual Systematic Differences in V4.x Product**

*Q1: What is causing the observed seasonal and regional biases in the Aquarius data*

*Q2: What additional evaluation products, if any, can be run to help answer Q1*

*TA/TB Comparisons*

- Implementation of Instrument Only Correction (S. Misra)
- Cold Sky Observations (D. LeVine on behalf of E. Dinnat)
- Non-ocean TA comparisons (S. Brown)

*Sea Surface Salinity (SSS) Comparisons*

- Consistency of Aquarius and Argo SSS in depicting temporal variations on various space and time scales (T. Lee)
- Regional/Seasonal Biases in Aquarius SSS (O. Melnichenko)
- In situ matchup analyses (G. Lagerloef on behalf of Hsun-Ying Kao)
- Regional/Seasonal Biases in Aquarius SSS: Possible causes in the geophysical model (T. Meissner)
- Impact of the new SST ancillary field for V5 (T. Meissner)
- V4.2.X Ta and SSS residual biases (L. Hong)

**Topic 2: Using SMAP data to improve geophysical models for SSS retrieval**

*Q3: What can the differences in SMAP/Aquarius SSS products constrain in the Aquarius calibration and retrieval algorithm*

- Inter-comparison of JPL SMAP and Aquarius SSS (A. Fore)
- Updated galaxy maps for Aquarius derived from SMAP (F. Wentz)
- Evaluation of RIM product with SMAP data (L. Jones)

### **Topic 3: Improvements to Forward Model**

- Updated land correction maps for V5 (F. Wentz) – *Oral presentation, no slides*
- RFI algorithm improvements (Y. Soldo, P. de Matthaeis)
- On seasonal and interannual variations in ocean-cal vs instrument-only cal algorithms (G. Lagerloef)
- Air-Sea dT correction approach and implementation (S. Brown)

### **Path to Version 5**

- Evaluation of Density and Spiciness Projects and Readiness for V5 (J. Schanze)
- Level 3 product scrubbing/data reduction (J. Vazquez/V. Tsontos)
- Updated schedule based on current state of understanding and algorithm maturity (All)