

Agenda for NASA Salinity Continuity Processing (SCP) Workshop

April 29-30, 2019, Santa Rosa, California, USA

Meeting location: Remote Sensing Systems, 444 10th St #200, Santa Rosa, CA 95401

Guideline for oral presentations:

Presentation ~12 minutes. Leave ~8 minutes for Q&A/discussion & transition

(Presenters' names are in italic)

Monday April 29

HQ briefing, public engagement, product distribution

- 8:30-8:50 *Eric Lindstrom & Nadya Vinogradova* (NASA HQ)
Briefing of NASA PO and OSST
- 8:50-9:10 *Annette deCharon* (ODYSEA LLC)
Societal Relevance of NASA Salinity
- 9:10-9:30 *Vardis Tsonetos* (JPL), Yibo Jiang, and Jorge Vazque
Status of Salinity Data Archival/Distribution at the PO.DAAC

Algorithms

Algorithms Overview:

- 9:30-9:50 *Thomas Meissner* (RSS), Frank Wentz, and Andrew Manaster
Status of the RSS Salinity Algorithm (including analysis and comparison of the residual biases in SMAP and Aquarius)
- 9:50-10:10 *Alexander Fore* (JPL), Wenqing Tang, Simon Yueh, and Akiko Hayashi
JPL SMAP Sea Surface Salinity Algorithm

10:10-10:40 Coffee/tea break

Algorithm Enhancements:

- 10:40-11:00 *Frank Wentz* (RSS), Thomas Meissner, and Andrew Manaster
Correction of Land Contamination in the RSS Algorithm (including a brief comparison between the JPL and the RSS algorithms)
- 11:00-11:20 *Alexander Fore* (JPL), Wenqing Tang, Simon Yueh, and Akiko Hayashi
Land and Sea Ice Correction for the JPL SMAP Salinity Data Product

11:20-11:40 *Yan Soldo* (NAS/GSFC & USRA), Emmanuel Dinnat, David Le Vine
(Remote presentation)

A method for land correction based on SMAP TB measurements

11:40-12:00 *Wendy Tang* (JPL), Simon Yueh, and Alex Fore

Preliminary results on L-band sea ice correction for SSS retrieval

12:00-12:30 **Discussion (esp. for land & ice correction algorithms)**

12:30-14:00 Lunch break

14:00-14:20 *Yiwen Zhou, Roger Lang* (George Washington Univ.), Emmanuel Dinnat and David Le Vine

(Remote presentation)

Salinity Variation in Seawater Dielectric Model Function

14:20-14:40 *Richard Lindsley, Andrew Manaster* (RSS), Thomas Meissner, Frank Wentz

Revised SMAP Solar Contamination Flagging

Instrument calibration

14:40-15:00 *Thomas Meissner* (RSS)

SMAP reflector emissivity correction

Assessments & applications

Salinity Validation:

15:00-15:20 *Shannon Brown* (JPL) and *Sidharth Misra*

Understanding Systematic Biases Associated with Observation Geometry

15:20-15:40 Coffee/tea break

15:40-16:00 *S  verine Fournier* (JPL), Tong Lee, Wenqing Tang, Michael Steele, Simon Yueh, Estrella Olmedo, and Anastasia Tarasenko

Intercomparison of SMOS, Aquarius and SMAP Sea Surface Salinity Products in the Arctic Ocean

16:00-16:20 *Doug Vandemark* (Univ. New Hampshire), Senya Grodsky, H. Feng, J. Levin, and J. Wilkin

Ongoing evaluation of SMAP salinity datasets for coastal and shelf-sea applications

16:20-16:40 *Gary Lagerloef* (ESR)

(Remote presentation)

Re-evaluation of the Triple-Colocation analysis for Estimating Aquarius Satellite Salinity Measurement Errors

16:40-17:00 *Viviane Menezes* (WHOI)

Evaluation of SMAP salinity products in the Indian Ocean

17:00-17:20 *Tong Lee* (JPL)

Evaluation of SMAP SSS using Argo data on various spatial scales

Tuesday April 30

8:30-8:50 *Emmanuel Dinnat* (Chapman Univ & NASA/GSFC) and David Le Vine

(Remote presentation)

Evaluation of SMAP SSS product: comparisons with other satellite products and in situ observations by the Argo network

Salinity Scientific Analysis:

8:50-9:10 *Oleg Melnichenko* (IPRC/University of Hawaii) and Peter Hacker

Improved spatial resolution in SMAP data versus signal-to-noise ratio: Preliminary results from analysis of existing products and non-resampled L2 SSS data

9:10-9:30 *Jingru Sun* (Princeton Univ.), Gabriel Vecchi, Enhui Liao, Laure Resplandy, Brian Soden

Impact of Sea surface salinity on tropical cyclone intensification in the Bay of Bengal: preliminary satellite observations and ocean modeling results

9:30-9:50 *Frederick Bingham* (UNCW), Matt Chmielewski, Joseph Brown and Oksana Chkrebti

The relationship between rainfall and sea surface salinity from buoy data

9:50-10:10 *Frederick Bingham* (UNCW), Joseph D'Addezio, and Karly Ulfsax

SSS sub-footprint variability from the ECCO 1/48deg global simulation

10:10-10:30 *Senya Grodsky* (Univ Maryland)

Intramonth oscillations of Atlantic ITCZ in SMAP satellite salinity

10:30-11:00 Coffee/tea break

11:00-11:20 *Yibo Jiang* (JPL), Jorge Vazquez, and Varids Tsonetos

SSS study in the Arctic region

In-situ and field campaign

- 11:20-11:30 *Sidharth Misra* (JPL), Javier Bosch-Lluis, Carl Felten, Mehmet Ogut, Tong Lee, Shannon Brown, and Simon Yueh
Cold-water salinity experiment over the Arctic Sea – Results and Observations
- 11:30-11:50 *Julian J Schanze* (ESR), Hsun-Ying Kao, Gary S E Lagerloef, and David Carey
Salinity Gradients and Sub-Footprint Variability from SPURS-2 and SMAP
- 11:50-12:10 *Jorge Vazquez* (JPL), Jose Gomez-Valdes², Marouan Boualin, Chelle Gentemann, Wenqing Tang
Using the Sairdrone Unmanned Surface Vehicle for Validation of Satellite Derived Sea Surface Salinity from SMAP: The California/Baja Coast Deployment
- 12:10-12:30 *Verena Hormann* (SIO/UCSD), Luca Centurioni, Nikolai Maximenko, and Yi Chao
Studies of near-surface salinity with surface Lagrangian drifters in support of SPURS-2

12:30-14:00 Lunch break

Validation platform and Pi-MEP collaboration

- 14:00-14:20 *Hsun-Ying Kao*, Julian Schanze and David Carey (ESR)
Overview of the Salinity Validation Data System (SVDS)
- 14:20-14:40 *David Levine* (NASA/GCFS)
SCP participation in Pi-MEP and definition of Aquarius/SMAP “matchup”
- 14:40-15:10 **Discussion (NASA collaboration with Pi-MEP)**
What do we provide/What do we get in return?
Aquarius/SMAP matchup data base: can we reach a consensus on definition of “matchup”?
Discuss delivery of the matchup data base to Pi-MEP.

15:10-15:30 Coffee/tea break

- 15:30-16:00 **Continuity and future missions** (Shannon and David lead discussion)
- 16:00-17:00 **Discussion (other topics)**
Product spatial resolution, resampling and spatially correlated errors.
Flagging Approach: Sun-glint, sea ice, land, RFI.
Roughness correction.
SMAP/Aquarius consistency.
Future field programs.
Radiometer long-term drift correction.
Land/ice correction (if need additional discussion beyond Monday’s discussion)