SWOT SDT Agenda

Tuesday, January 13

8:00   Continental breakfast/registration - Patio

Mission overview (L-L. Fu)

8:30   Meeting overview (L-L. Fu)
8:45   Program overview (S. Cherchali, E. Lindstrom)
9: 15   Project overview (P. Vaze, T. Lafon)

10:00 Break

Keynote presentations (R. Morrow)

10:30   Vertical velocity in the upper ocean (D. Chelton, G. Lapeyre)
11:00   SWOT contributions to improved understanding of human impacts on the water
        cycle (F. Hossain, S. Biancamaria)

Science issues for the meeting

11:30   Summary of the hydrology issues (T. Pavelsky, J-F. Cretaux)
11:45   Summary of the oceanography issues (R. Morrow, L-L. Fu)

12:00 Lunch -Patio

Plenary session (J-F. Cretaux)

Algorithm development

1:15   Algorithm Development Team (ADT) status and issues (E. Rodriguez, N. Picot)
2:00   Algorithm Theoretical Basis Document (ATBD) for the onboard processor (OBP)
        (E. Peral, D. Esteban-Fernandez)
2:30   Onboard processor development status (E. Peral, D. Esteban-Fernandez)

3:00   Break

Plenary session (T. Pavelsky)

Instrument checkout and Cal/Val

3:20   Instrument checkout and OBP validation (D. Esteban-Fernandez, E. Peral)
3:35   Overview of Cal/Val team and planned activities (E. Rodriguez, S. Calmant,
        N. Picot)
3:50   1-day fast sampling phase

Oceanographic rationale (L-L. Fu)
Develop ocean and hydrology cal/val sites (E. Rodriguez, J-F. Cretaux)
Develop a cal/val plan. (CalVal Leads)

AirSWOT Status

4:30   AirSWOT Instrument Engineering and Programmatic Status (E. Rodriguez)
4:50   The French program status (T. Lafon)
5:10   What we have learned (hydrology phenomenology & ocean observations) from
        the 2014 AirSWOT flights (E. Rodriguez)

5:40   Discussion

6:00   Adjourn

Wednesday, January 14

8:00   Continental breakfast - Patio

Splinter sessions

Oceanography (R. Morrow, L-L. Fu)

8:30   Onboard processor (OBP) issues from the first ADT meeting (S. Gille,
        G. Dibarboure, T. Farrar)
9:00   Work plans for the ocean simulators for the OBP (D. Esteban-Fernandez,
        F. Soulat, B. Chapron)
9:30   Science investigations with the ocean simulator (C. Ubelmann)

- Introduction (C. Ubelmann, L. Gaultier)
- High-frequency signals (A. Savage, B. Arbic)
- Estimate error covariance for state estimation problems (E. Cosme)
- Assimilation of SWOT data (P-Y. Le Traon, M. Benkiran)
- Estimate vertical velocity (B. Qiu, P. Klein)

10:15 Break

10:30   Ocean data products (N. Steunou, S. Gille, P. Callahan)
10:50   AirSWOT ocean campaigns (E. Rodriguez, R. Morrow)

- Cal/Val of AirSWOT: April 2015 campaign plans (E. Rodriguez)
- CARTHE – A Gulf of Mexico experiment (E. D'Asaro)
- European Cal/Val sites (R. Morrow)

12:00 Lunch - Patio

Hydrology (T. Pavelsky, J-F. Cretaux)

8:30   Cal/Val plans for hydrology post-launch (E. Rodriguez, S. Calmant, T. Pavelsky)
9:30   AirSWOT hydrology campaign update (E. Rodriguez, J-F. Cretaux, M. Durand)

10:00 Break

10:20   Characterizing river slope and river slope errors (D. Esteban-Fernandez,
        T. Pavelsky)
11:00   Update on layover characterization (E. Peral, D. Esteban-Fernandez)
11:30   Relationship between SWOT and DEMs, including floodplain DEM
        (T. Pavelsky)

12:00 Lunch - Patio

Plenary session (L-L. Fu)

Pre-summing issues and high-resolution data coverage

1:15   Pre-summing issues and strategies for baseline and future evolution (D. Esteban-Fernandez)
2:00   High-resolution coverage map: baseline and future evolution (R. Abelson)
2:20   CNES downlink data volume constraints (V. Albouys)
2:40   Recharge of the High-Resolution Working Group including synergistic science objectives (S. Biancamaria, Y. Chao)

3:00   Break

Splinter sessions

Oceanography (R. Morrow, L-L. Fu)

3:30   Mesoscale and submesoscale dynamics

*1. Some "fundamental" questions on meso/submesoscale dynamics in the
upper ocean*

- Identification of the submesoscale regimes in the global ocean and
        impact of submesoscales on the EKE in energetic regions (P. Klein, B. Qiu; 15')
- Balanced and unbalanced motions: scale dependence (J. McWilliams; 20'):
- Impact of internal waves on the SSH at submesoscales (A.Ponte; 10')

*2. The synergy of using different global datasets to diagnose the 3D
motions in the upper ocean*

- How the SWOT errors will vary regionally and seasonally, and how this
        may impact the restitution of the fine-scale signal (G. Dibarboure; 10')
- The existing and future satellite and in-situ global datasets
        (B. Chapron;15')
- Lagrangian technics to retrieve small scales from larger ones using
        satellite data (R. Morrow; 10')
- Dynamical interpolation techniques applied to SWOT data (C.Ubelmann;10')

- Discussions

5:30   Adjourn

Hydrology (T. Pavelsky, J-F. Cretaux)

Hydrology Algorithms and Data Products

3:30   Water/land classification (F. Tupin, B. Williams, R. Fjortoft)
4:00   Review of L2 hydrology products (N. Picot, M. Durand)
4:20   Discussion of L2 products
4:35   River data products and functional flow (M. Durand, S. Biancamaria)
4:55   Lake data products and functional flow (J-F. Cretaux, T. Pavelsky)
5:15   Discussion of vector products

5:30   Adjourn

6:00   Reception – The Marine Room

6:45   Working dinner – The Marine Room

Thursday January 15

8:00   Continental breakfast - Patio

Splinter sessions

Oceanography (R. Morrow, L-L. Fu)

8:30   Science issues for high-resolution coverage (Y. Chao et al)

- Overview (Y. Chao)
- Bathymetry and gravity (E. Garcia, D. Sandwell)
- Tides (B. Arbic et al)
- Nearshore processes and waves (S. Gille)

9:15   Science plan for the 1-day fast sampling phase (R. Morrow, L-L. Fu)

- Internal tides (J. Girton)
- Surface waves (F.Ardhuin)
- 2D energy spectra (B. Arbic)
- Rapid sub-mesoscale structures – (P. Klein, Bo Qiu)
- Daily 2D upper ocean processes – (S. Gille, B Cornuelle)
- Coastal processes (Y.Chao, T. Strub)

10:00 Break

10:30   SWOT Tide models & Tide White paper (B. Arbic et al)
11:00   Post-launch in-situ oceanographic campaigns (Y. Chao et al.)

- SWOT field campaign: concepts and ideas (Y. Chao)
- SPURS field campaign in support of Aquarius salinity mission (T. Farrar)
- Lessons learned from the LATMIX submesoscale studies (E. D'Asaro)
- Lessons learned from altimetry-in-situ high resolution campaigns (R. Morrow, P. Klein,
     F. d'Ovidio)
- Discussions

12:00 Lunch - Patio

Hydrology (T. Pavelsky, J-F. Cretaux)

8:30   Hydrology simulator current status and updates (Project)
9:15   Recent results from the SWOT Simulator (I. Turki et al)
9:35   RiverObs: a new tool for vectorizing pixel cloud data (E. Rodriguez)

10:00 Break

10:20   Guest talk by Yongwei Sheng (UCLA) on global lake data products and their
potential for informing SWOT algorithms
10:50   Update on discharge algorithm intercomparison (M. Durand, H. Roux)
11:10   Update on SWOT/model fusion efforts (E. Martin, K. Andreadis)
11:30   Discussion of science priorities going forward (J-F. Cretaux, T. Pavelsky)

12:00 Lunch - Patio

Plenary session (R. Morrow)

1:15   Summary of the Application Group meeting (M. Srinivasan et al)
2:00   Contributions to the SWOT coastal & estuarine white paper (B. Laignel, Y. Chao,
T. Strub, P. De Mey, F. Lyard)
2:30   Long-term AirSWOT science program perspectives (T. Pavelsky et al)

3:00 Break

3:30   Next ROSES/TOSCA announcement of opportunities (S. Cherchali,
E. Lindstrom)
4:00   Discussions/wrap-ups

5:00 Adjourn