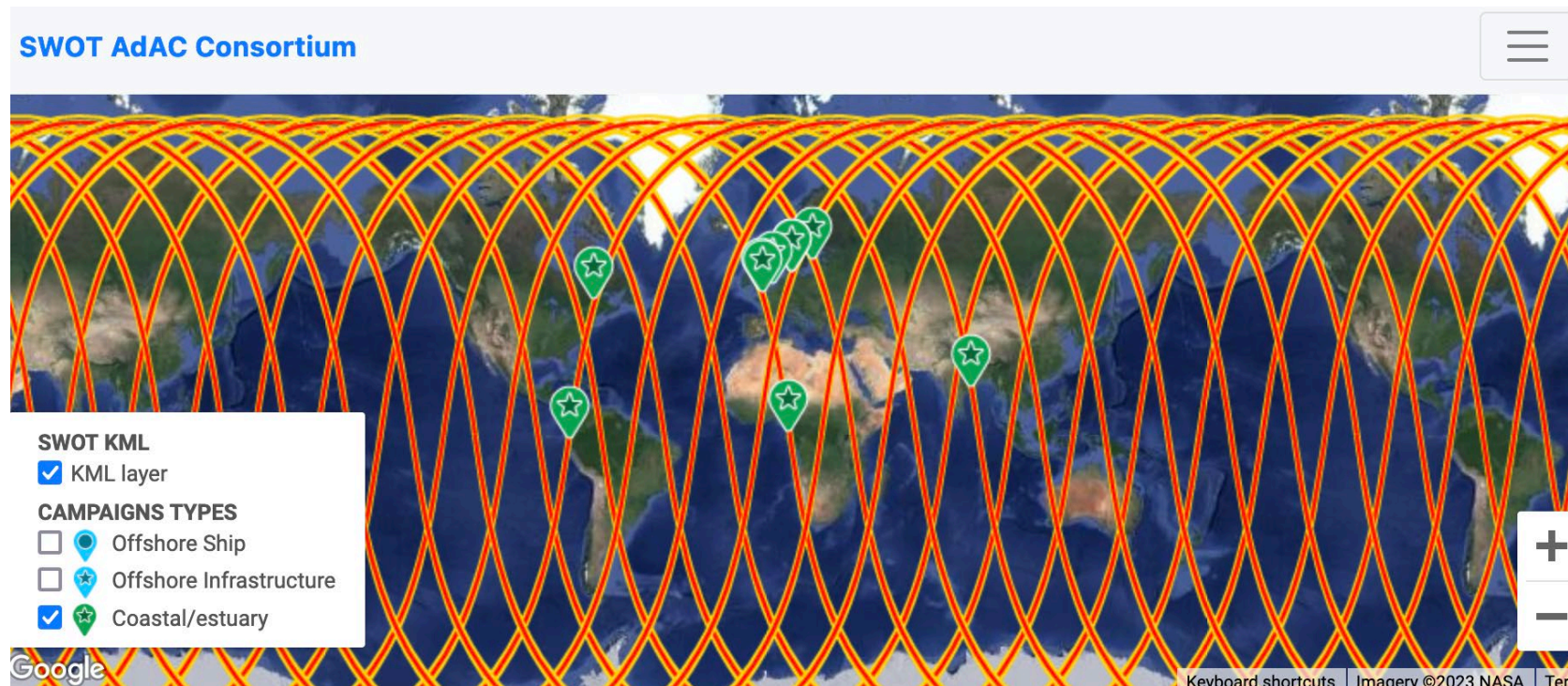


Deltas, Estuaries & Coasts WG

Session Summary [32 participants]

We recognize the fact that SWOT infused new momentum to coastal (including deltas and estuaries) research community. Why haven't we done this before? Thanks to SWOT, the group has gathered much momentum and has been very active in the field for SWOT science cal/val measurements.



9 Science Cal/Val sites and growing

Presentations

(<https://www.swot-adac.org/>)

1. St-Laurent (Lawrence) Estuary, Québec, Canada

Pascal Matte , Marc Simard

2. Tropical Estuaries field campaigns:

Guayas Estuary, Ecuador, Marc Simard, Paola Calle Delgado, Mireya Pozo Cajas

Komo Estuary and Ogooué river, Gabon, Marc Simard, Nicaise Rabenkogo, Emmanuel Mambela

3. Hecate (Western Canada)

Guoqi Han and Charles Hannah

4. Elbe estuary and Baltic Bight, Germany

Luciana Fenoglio-Marc

5. Normandy coasts, France

Laurent Froideval, Edward Salameh, J. Deloffre, Imen Turki, B. Laignel

6. Severn Estuary, UK

Paul Bell

7. Gironde estuary + CAL/VAL

Florent Lyard, Nadia.Ayoub & COCTO Team

8. Round robin on coastal corrections for altimetry

Florence Birol, Fernando Nino

Summary Notes and Recommendations

1. Rec-1: Do not delete any data !

- e.g. Ice backscatter signature.
- Discovery of complementary information

2. Rec-2: We need the tides in coastal regions for both for the LR and HR products

- Notes: if corrections, Insert correction attribute in unsmooth 250m products (SSB, tides, wet tropo, etc). We will need to compare LR and HR to assess tide correction.
- Notes: Sea state bias may be overestimated at low tide (effects on significant wave height). E.g. Sea state bias correlated with tides. Notes: Reference mean height, FESS is currently best product
- **REC-2a**: Need to develop coastal-specific corrections (SSB, DAC, wet tropo) for coastal/estuaries
- Notes: Compute corrections at high-frequency, separate the ocean tide correction to loading tide correction in the correction provided in the file. Revise the classification thresholds ;
- Do we need more flags ? Zone Intertidal.
- **REC-2b**: Project to discuss with ST scientists before definitive choices on corrections/flag.

Summary Notes and Recommendations (cont)

3. **REC-3: Resolve Coast-specific issues related to MSS, geoid/datums of reference between in situ, airborne observations and altimetric data**
 - Notes: Do we need MSS in estuaries? NO, we need accurate Geoid
 - **REC-3a:** begin discussions and meetings to elucidate the intricacies of geoids and datums.
 - **REC-3b:** create and/or document a database of regional geoids
 - Notes: Model mean is better than any altimeter data. Can SWOT improve MSS model?
4. **Rec-4: Investigate and develop methods for shallow bathymetry mapping when dry. (e.g. mudflats, beaches, etc)**
5. **Rec-5: Inventory and Create databases of ancillary datasets**
 - Notes: Inventory or create accurate coastline products/masks + accuracy. Sentinel-2? Global Island Database ?
 - Notes: Generate in situ, airborne and ancillary spaceborne cal/val database to support collaborations. ADAC?
6. **REC-6: Create new sub-working groups and side discussions**
 - Discuss methods for comparing LIDAR and SWOT data
 - Discussion on geoid/datums to clarify
7. **Publication of results**
 1. ST did not have time to assess quality of data and products.
 2. How long have ST scientists between accessing the best calibrated data and the data being public ?