

« Adopt a crossover »

SWOT Launch Sept 2021

Fast sampling phase (1 day orbit) : Jan-Fev-Mar 2022

Science phase (global coverage, 21-day orbit) : 3 yr > Mar 2022

The fast sampling phase is aimed at CalVal operations.

Not ideal for end users: the exact time window of this phase may shift; SWOT data during this phase may have a longer latency.

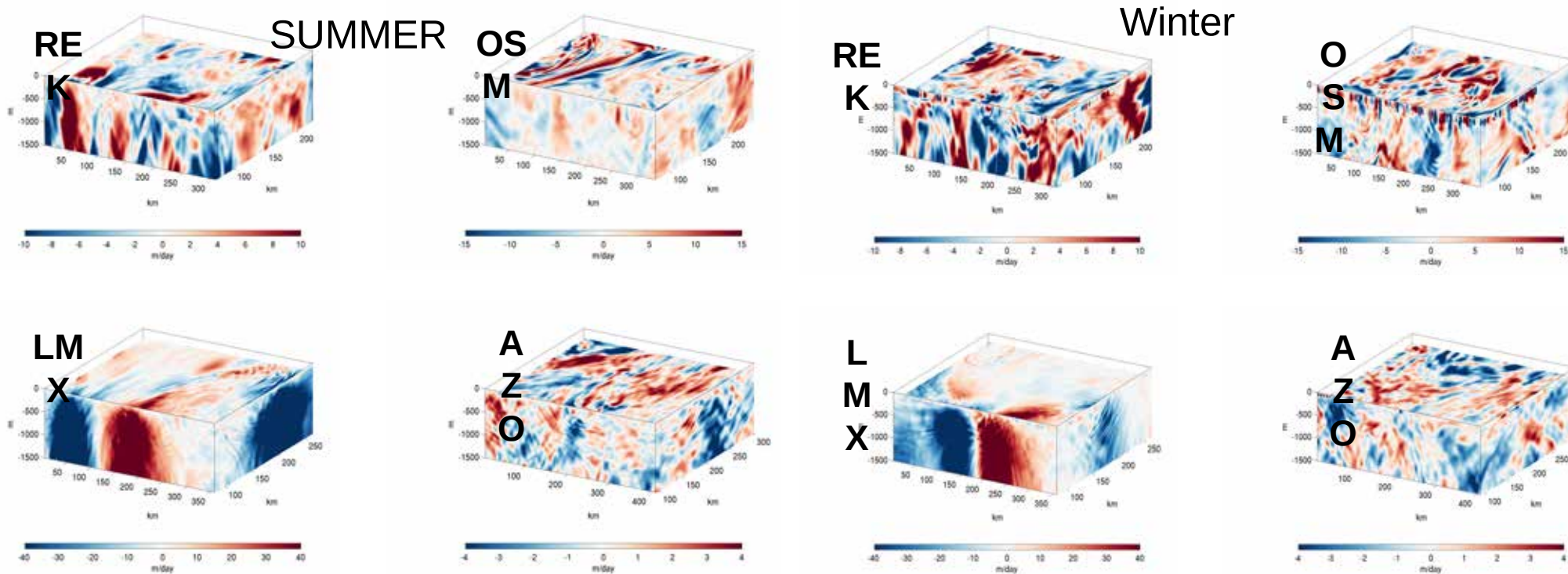
Nevertheless, the high resolution of SSH in both space and time available in the fast sampling phase is a unique opportunity for fine scale studies.

This has motivated informal contacts with groups outside SWOT-ST for “adopting” the largest cross-over number (or other track segments).

The aims are:

- scientifically exploit the fast-sampling phase with a multi-site, global experiment
- provide early user feedback on SWOT data
- prepare the scientific community to the SWOT nominal phase

No single region is typical



There is not a single “typical” fine scale situation in the ocean, but multiple contrasted regimes.

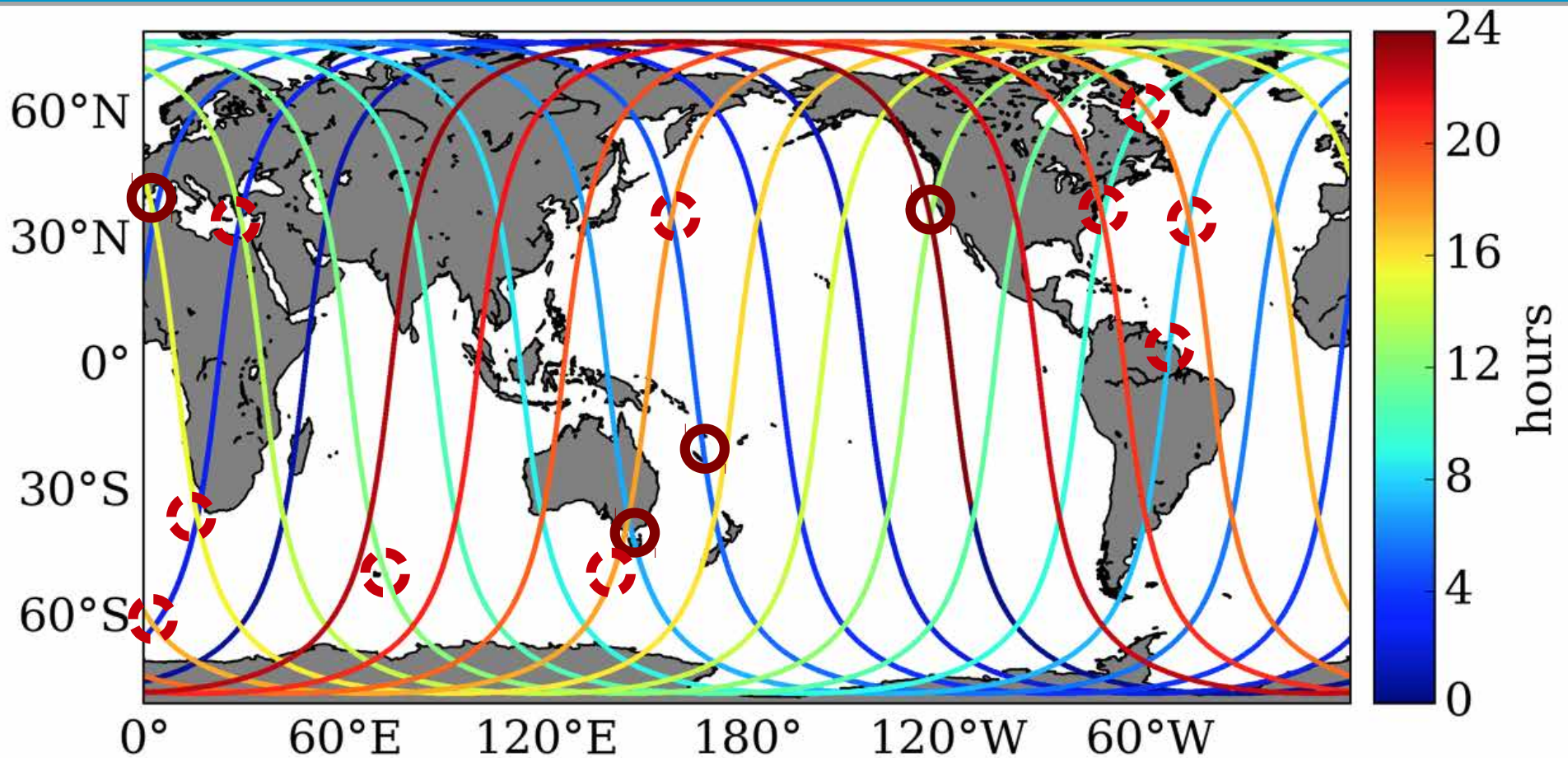
By instrumenting multiple Xovers we can explore SWOT observations in different regions (and seasons: two hemispheres!).

Status

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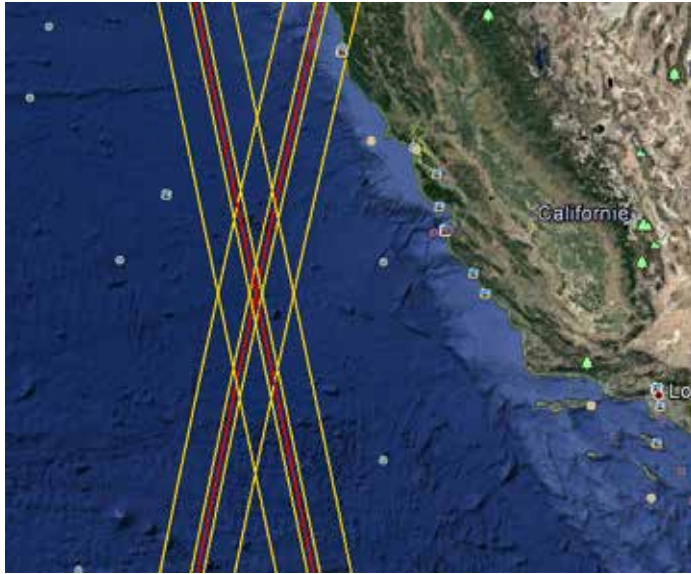
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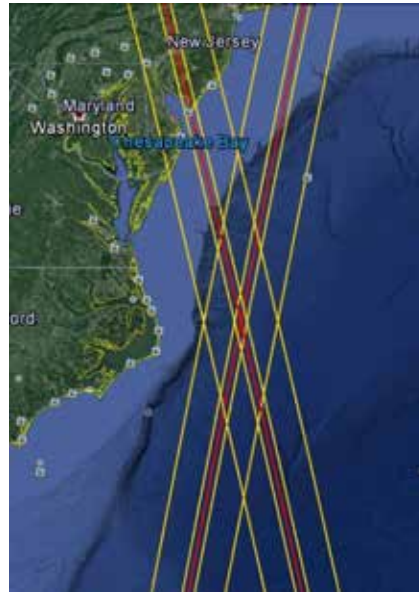


○ Formally adopted (CalVal plan): 4 ○ Proposed adoption: 10

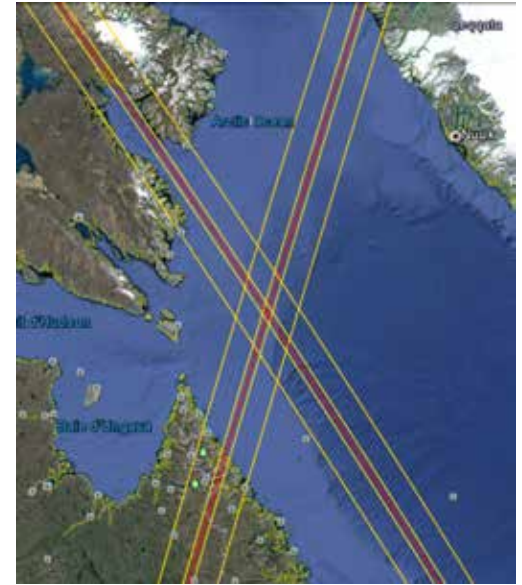
Other opportunities



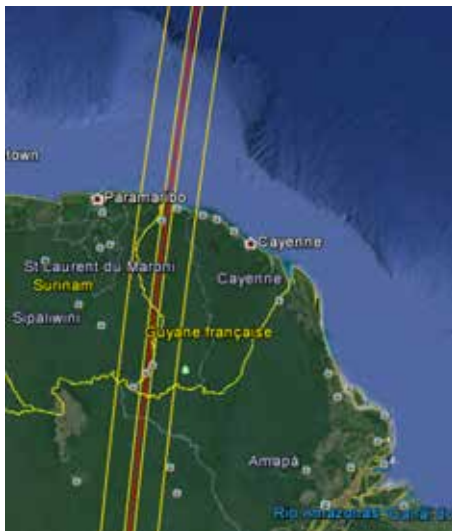
California



Gulf Stream / Mid-Atlantic Bight ?



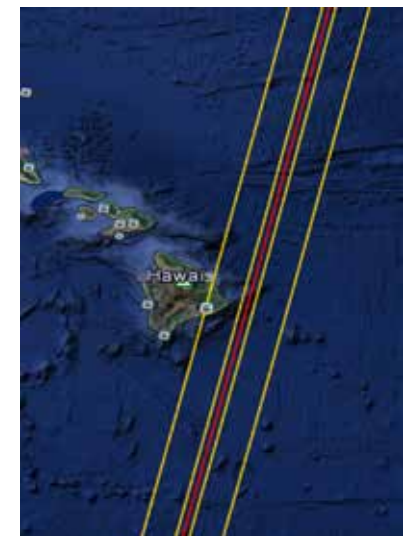
Labrador Sea ?



French Guyana /
Brazil Current ?



Agulhas xover,
Benguela upwelling?



Internal tides near
Hawaii?

1. Which framework for a « SWOT Xover Consortium » ?

1. Separated from the SWOT-ST

2. Phasing with SWOT

Due to the uncertainties associated to the fast sampling phase, the idea is not to push people to build new and big campaign, but to phase existing programs with SWOT

3. In-kind support from SWOT

- early access to SWOT standard (“non-expert”) products only
- NRT, HR multisatellite package for each adopted crossover

4. In-Situ Data Policy

- In-situ data should be made available (after a delay?) and archived for future comparisons.
- How to set up a SWOT in-situ data archive? From the Project Calval data and externally sourced in-situ data

2. Which activities should support the SWOT Xover Consortium?

Before the launch

OceanObs White paper (deadline – end of September)

Workshop/PhD thematic School “FineGlob” June/July 2019 (Marseille?)
“Preparing next generation fine scale oceanic experiments”

After the launch

Special Issue (peer reviewed) with the result of the multi-site experiment

3. Which common multi-site experiment?

Every “adopter” will be free to perform their own specific studies. On the top of this we could however propose a shared minimalistic protocol to have one multi-site common experiment.

1. balanced motion vs. IGWs

- gliders, ADCPs, **uCTDs**, moorings

2. observations of 2D/3D Lagrangian trajectories (vertical velocities/fluxes)

- swarms of 2D/3D Lagrangian drifters/floats?

Which funding sources?