

SWOT



National Aeronautics and
Space Administration

Surface Water and Ocean Topography (SWOT) Mission



Science Team Meeting

Montreal, Canada

June 26, 2018

Program Status

Selma Cherchali

Head of Space Climate Observatory Program

SWOT Program Manager

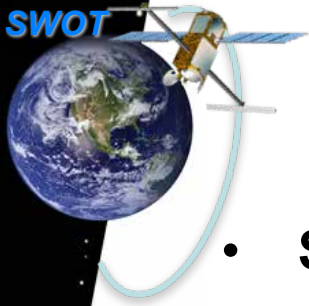
CNES – Science, Applications and Innovation Directorate

Eric Lindstrom

Physical Oceanography Program Manager

SWOT Program Scientist

NASA Headquarters



SWOT – CNES Program Status

- **Short Term Products implementation**
 - CNES management meeting (June 18th)
 - Brief approach to the ST (ST meeting, today!)
- **CNES – NASA JSG Meeting (July 18th)**
 - » Approval of the new schedule and LRD September 24th 2021,
 - » Report the joint SDS Key Point results to confirm implementation of short latency product approach - ~Feb 2019
 - » Approval to proceed with detailed design
- **CNES SWOT C/D/E1 budget:**
 - In line with new schedule forecast,
 - Overall Cost to completion around 242 M€ with margins,
 - Including contribution from UKSA for about 6.1 M€,
 - Budget includes Science activities support and Cal/ Val,
 - Dedicated budget to support downstream activities



Program Science Status

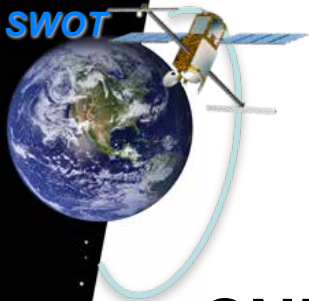
The mission's Science Team (ST) has been selected via NASA's ROSES and CNES's TOSCA Programs.

The ST is composed of 52 investigation teams with 25 in oceanography, 21 in Hydrology, and 6 in synergistic sciences. A significant portion of the new members are from the SDT.

- The ST is rich in international participation: 22 in US, 18 in France, 6 in Brazil, 1 in Spain, Japan, Canada, Greece, Australia, and Colombia.

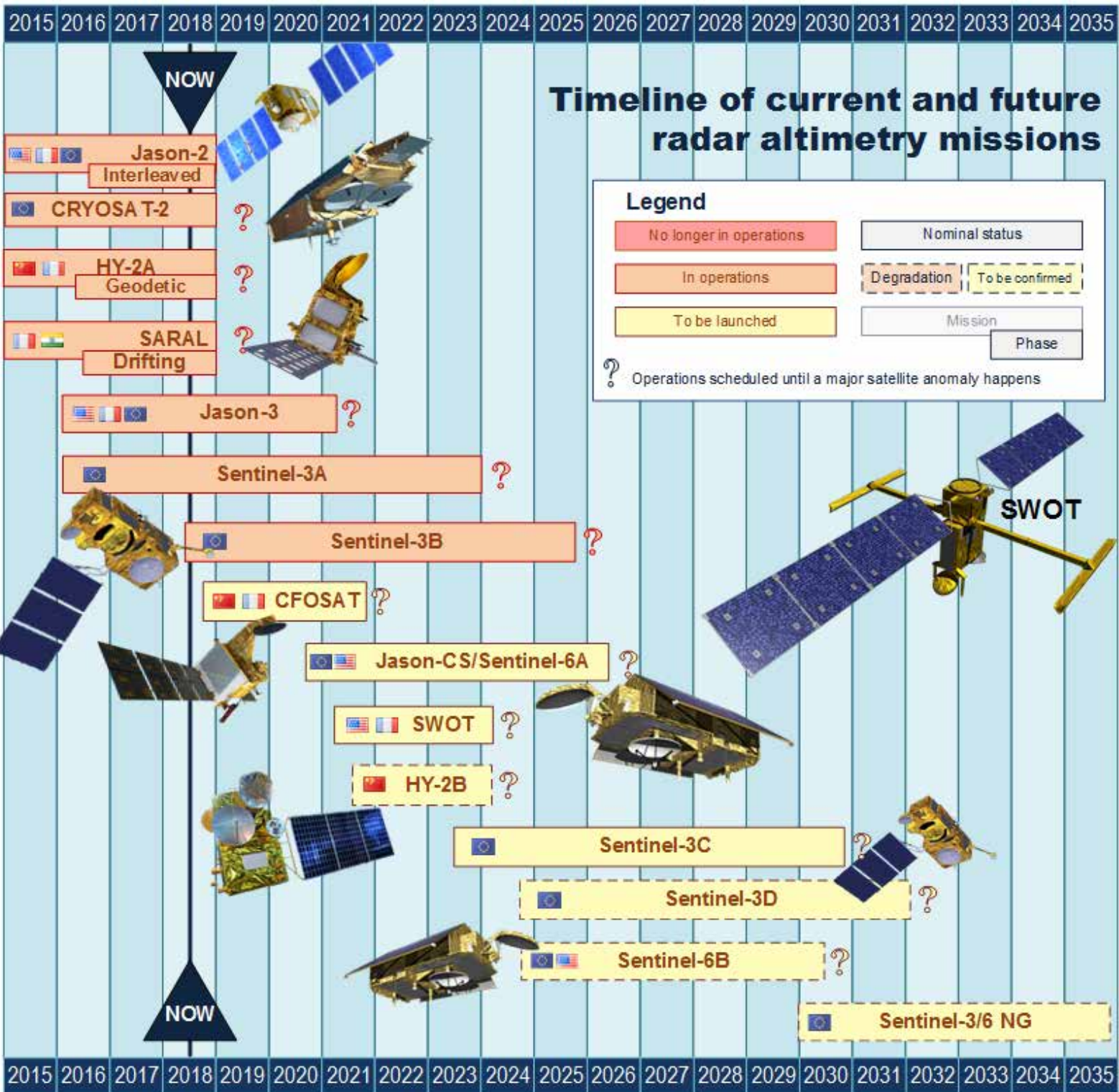


- A strong involvement from French Science Community
- Excellent cooperation with US and International Science community (South America, Africa, Europe, India, Japan,...)
- South America Water from Space (Santiago, Chili, March 26-28, 2018)
- Water World Forum (March, 2018) participation in thematic sessions



CNES Programs Status

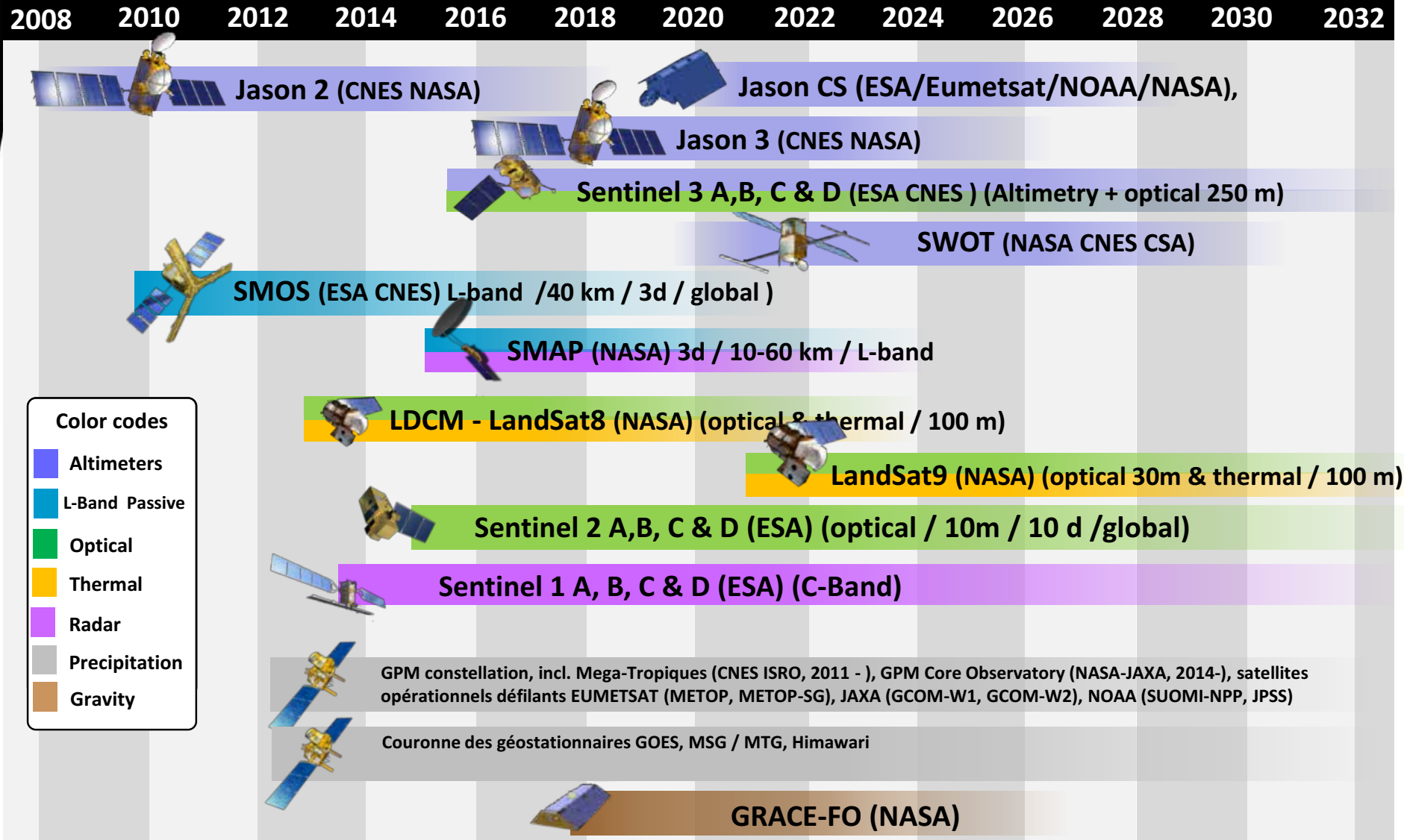
- **CNES/ NASA Cooperation**
 - Excellence of NASA / CNES/ JPL relations : numerous executives visits and meetings,
 - Successful launch of the INSIGHT mission.
 - OSTM/Jason 2 oceanography satellite mission marks its **10th year in orbit**
- **CFOSAT launch schedule : October 19th – 24th , 2018**
- **.SWOT Launch : nearly 3 years from the Launch !!**



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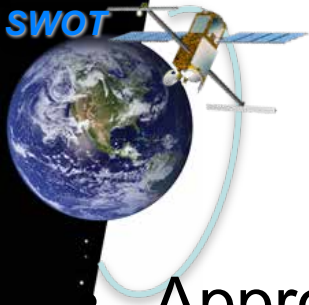


The Roadmap for hydrology missions



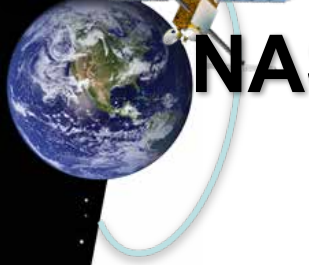
Color codes

- Altimeters
- L-Band Passive
- Optical
- Thermal
- Radar
- Precipitation
- Gravity

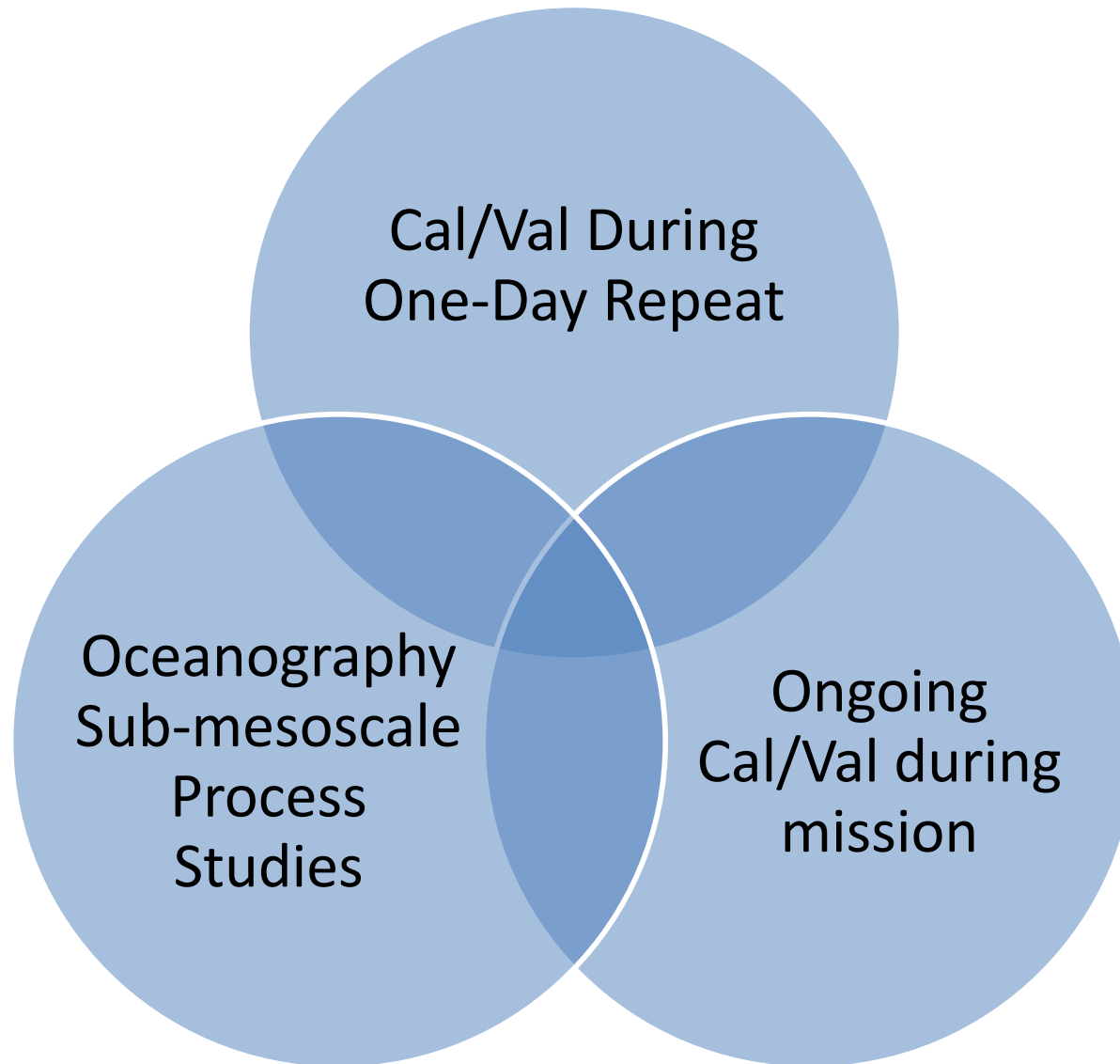


NASA Program Status

- Approximately 3 years out from launch...
- Need to plan NOW (next six months) for oceanography cal/val (sans AirSWOT) and parallel oceanographic process study.
- Current science team projects only 50% complete, but we must re-compete and adjust the Science Team (jointly with CNES) during CY2019 for CY2020 implementation.
- Now is the time to provide feedback on both topics!



NASA Oceanography SWOT Field Programs





Planning SWOT Oceanography Field Programs

- NASA planning for Cal/Val during One-Day is advancing through a series of trial deployments off California.
- Need to work during next six months to entrain broader scientific (*in situ* experiment expertise) and agency (e.g. NSF, NOAA) community.
- Prepare plans for FY21 NASA budget cycle by 1st Quarter CY19.
- Marshal SWOT Project resources plus over-guides for cal/val, proposals to NASA, NSF, and NOAA for scientific process study(s).



Science Team Re-competition

Re-compete through coordinated ROSES (NASA) and TOSCA (CNES) calls in CY19 for project starts in early 2020.

- NASA ROSES will be issued ~ 14 February 2019. Text for the SWOT Science Team announcement must be drafted by November 2018.
- Coordination of NASA and CNES on announcement during August-October 2018.
- Some key issues for side-bar discussion:
 - What resources are required (size and capabilities of team)?
 - How does the team composition change for launch phase?
 - What are the priority work areas for CY2020-2023?
 - What is best working relationship between oceanography and hydrology?