



COSS-TT meeting (MS Teams)

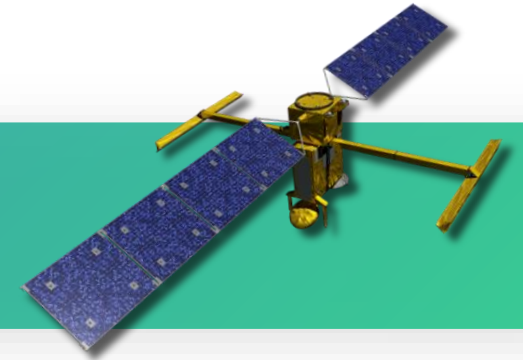
« Next generation of
satellite technologies for
coastal observation »

#IoT / OoT
#NewSpace
#SWOT

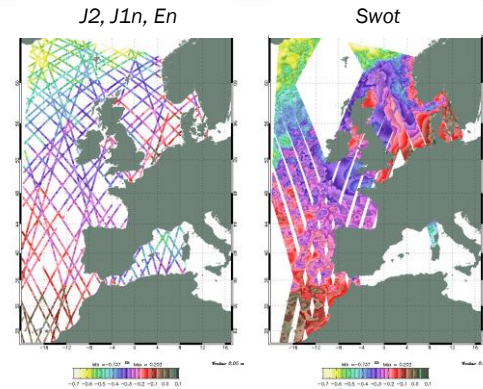
9 - 11 June 2021



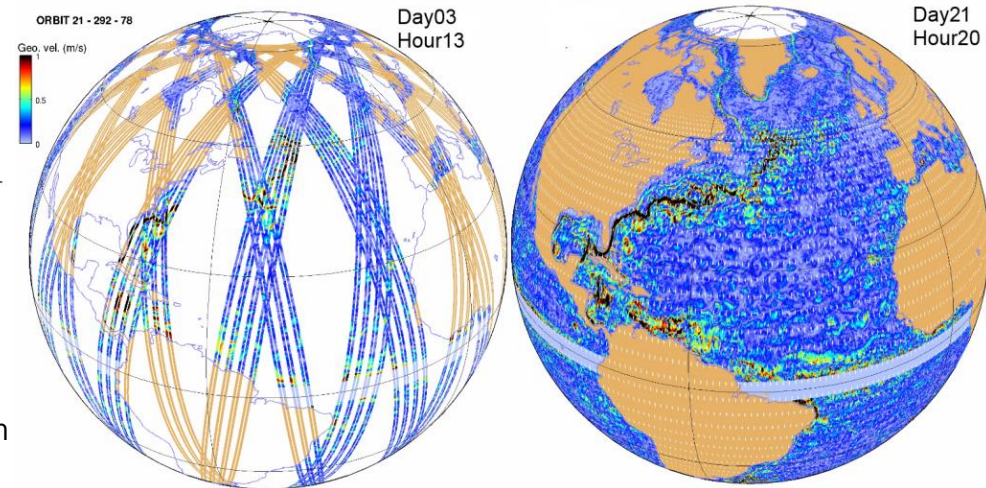
SWOT: a new altimetric mission



- SWOT : **Surface Water Ocean Topography**
- Wide-swath altimeter mission concept
- Accurate future monitoring of local sea level changes at the land-sea interface
- Not altimetric tracks but **altimetric swaths** !
- High-resolution 2D observations in coastal regions
- Observation of finer-scale **coastal currents** and **storm surges**
- Improve knowledge of **coastal tides** & **internal tides** that have not been well sampled by conventional altimetry
- Representation of **mesoscale marine eddies**
- **High resolution global ocean altimetry**

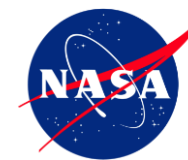


Simulated SSH observations
Credits Mercator/M. Benkiran



Credits JPL/C.Ubelmann

Satellite	SWOT
Launch on	15/11/2022
Lifetime	3 years mission
Altitude	890 km
Inclination	77.6°
Repetitivity	21 days
Agency	CNES/NASA/CSA/UKSA



Ocean of Things: Argos/Kinéis



- ARGOS, today boosted with **KINEIS** (CLS DNA)
- Today 4 000 ocean platforms tracked per month => IoT / OoT
- Key factors: energy / form factor
- Operational oceanography, wildlife tracking, biologging... already benefit from this **IoT connectivity**
- Today challenges now tackled:
 - **Low cost** (modem-chipset / service)
 - **Up/down link**
 - **Revisit**
- New horizons are possible for:
 - Dedicated **in-situ programs**
 - Low cost acquisition of data in **coastal areas** at global scale
 - **Citizen-science program opportunities**





THANK YOU

CLS: For Earth, from Space

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