

# Advances in Coastal Altimetry

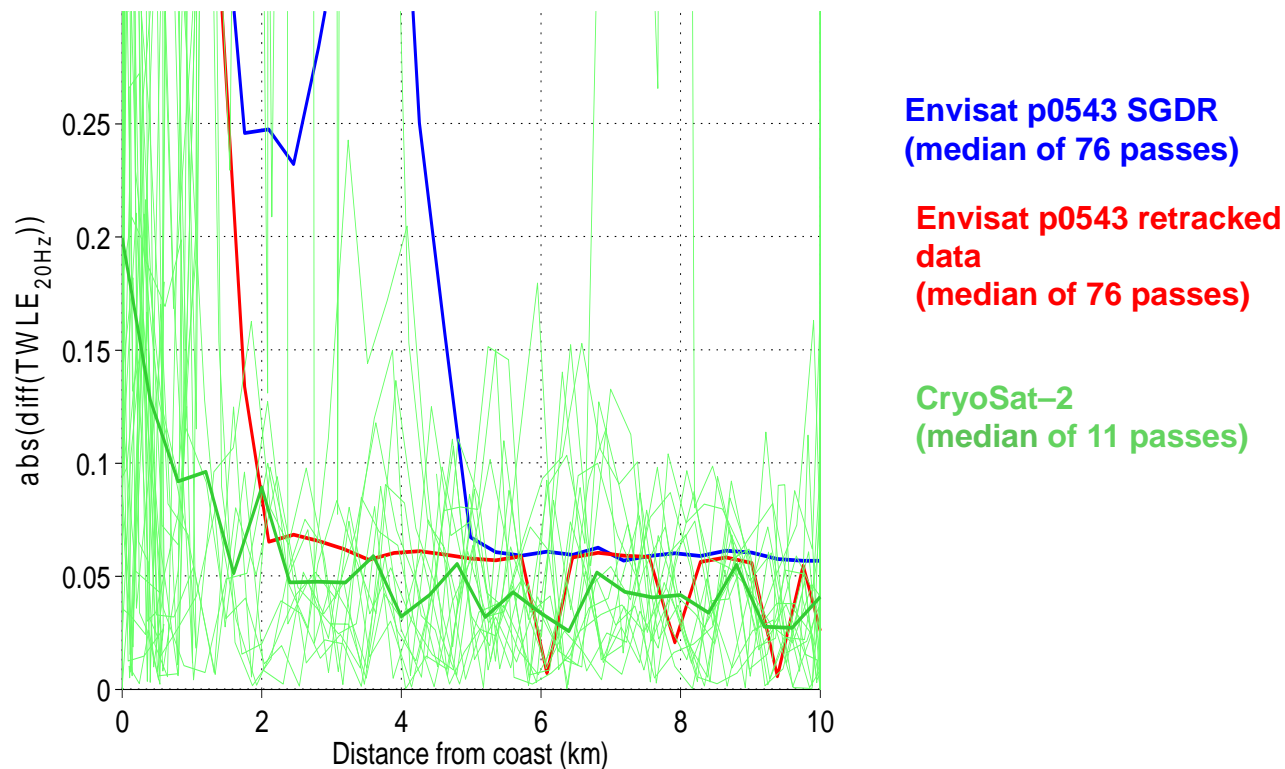
## Summary

Chairs: Florence Birol, Marcello Passaro and Ted Strub

# Structure of the Session

- 3 Oral Reviews
  - Technical improvements (retracking and corrections)
  - Application and multi-sensor/in-situ synergies
  - Synergy with models
- +  
Several posters (15) covering aspects of these topics

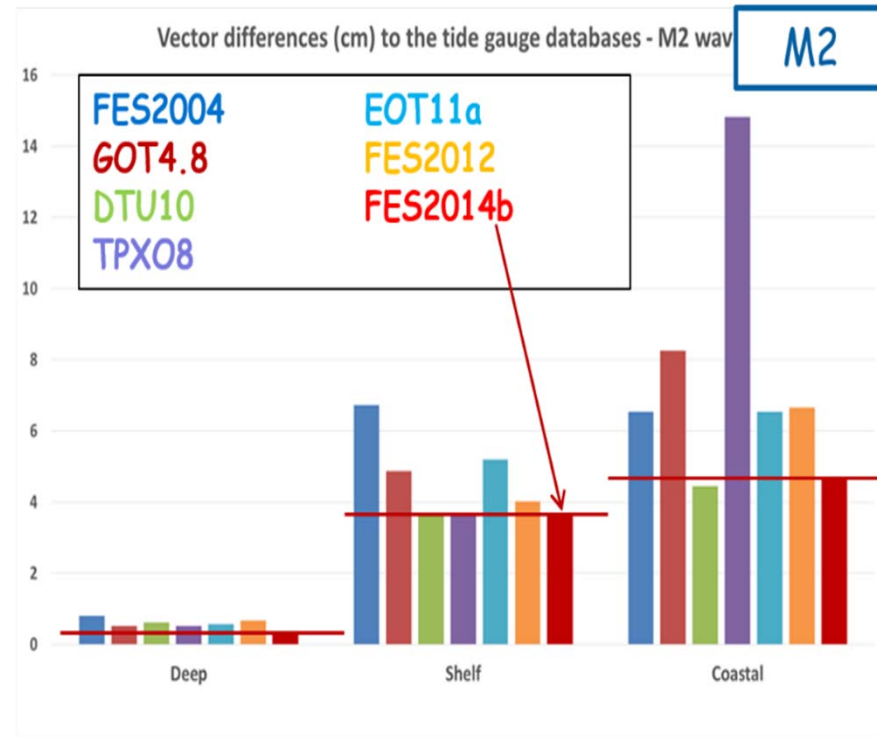
Progresses in retracking are acknowledged, but a standard and user-friendly data source is needed

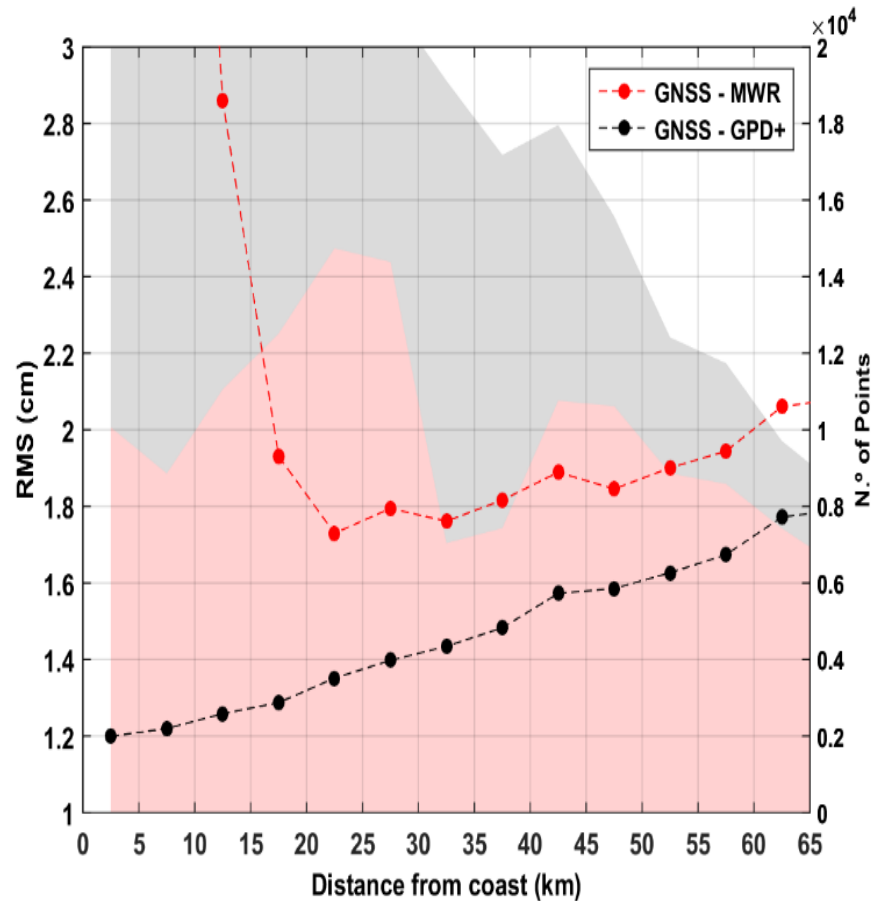


But a lot of discussion was focused on corrections (“adjustments”) and references...

Example: Differences between tidal models greatly increase at the coast

Good knowledge of bathymetry is needed to improve tidal modelling in the coast





## CORRECTIONS (“Adjustments”)

- Need for high rate, to exploit added value of high-rate ranges, swh, winds.
- Special mentions to: Wet Tropo, Sea State Bias, DAC

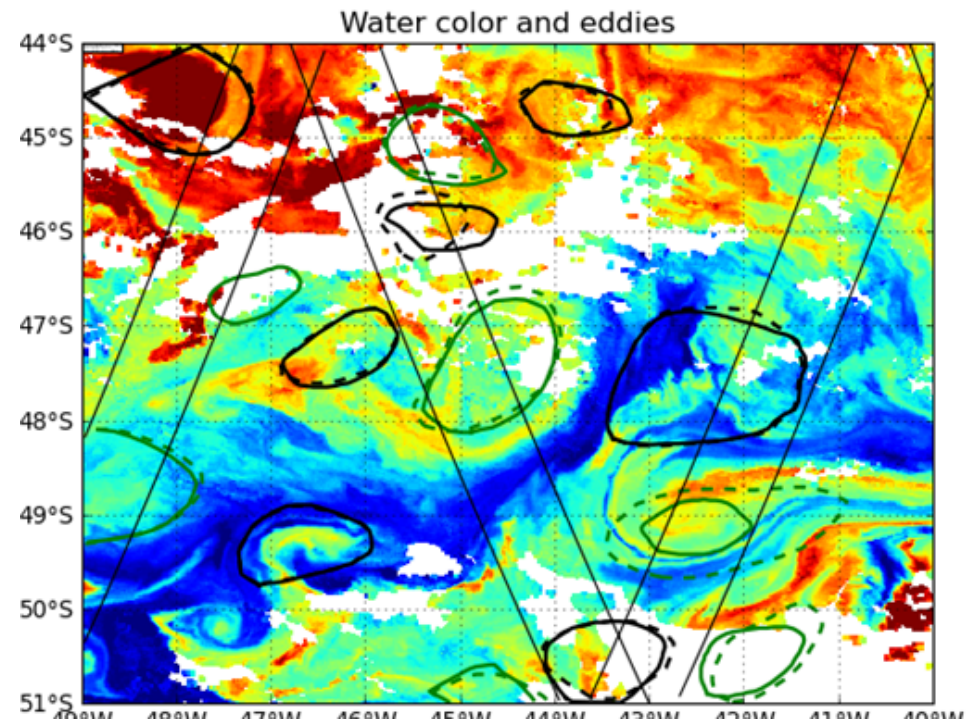
## REFERENCE SURFACES

- Mean Sea Surface and Mean Dynamic Topography needs to be recomputed with coastal altimetry data (issue of gridded MSS models vs Along-Track MSS with coastal altimetry data)

## SCALES OF VARIABILITY (Temporal and Spatial)

- Exploit favorable situation of
  - \* (soon) 6 Altimeters in orbit
  - \* Co-located SST (and Ocean Color) measurements with Sentinel-3

SYNERGY WITH SWOT  
fundamental to understand  
more about fine scales of  
variability and our capability  
to observe them



## COASTAL OBSERVING SYSTEM

Multi-Platform analyses compares and combines altimeter SLA with surface data from tide gauge data, drifters and coastal radars; and subsurface data from gliders, undulating vehicle and ADCP surveys

Continue “approaching” the coastal modelling community (ex. ARCOM effort): models are able to resolve scales that altimeter cannot resolve.

The two communities needs more interactions (wikis, user needs) and understanding of feasibility.



## DATASETS AND EXPLOITATION

Good Progresses, but partner-communities (such as Coastal Modeling community) still reluctant to adopt the advances in Coastal Altimetry.

Why? Lack of Synthesis, i.e. available products:

- have poor documentation
- are not user-friendly
- are only partial (only retracking, only corrections, only along-track)
- do not provided high level (L4 gridded) coastal products

**THANKS FOR YOUR ATTENTION**