Summary of Tides/HF signals session

- 5 presentations :
  - 1 on coastal processing
  - 3 on Internal Tides (coherent + incoherent)
  - 1 on Internal Waves (including internal tides)
- 8 posters :
  - 2 on global models DTU16 and DAC
  - 4 on regional/coastal tides models (Weddel sea, northern Bay of Bengal, Arctic + regional bathymetry)
  - 2 on in situ measurements (CalNaGeo GNSS + Gliders and ADCP)

Summary of Tides/HF signals roundtable

- **Alternative processing approaches such as fully-focused SAR processing are emerging. Will the current Sentinel-3 and Jason-CS/Sentinel-6 systems allow for novel processing approaches to be fully exploited?**
  - Such alternative approaches are interesting for coastal altimetry/coastal models
  - New processing/retracking takes time to evaluate
  - Benchmark for validation of these new processings has been proposed and need to be continued

- **Coastal tides**
  - Continuity of corrections between offshore and onshore
  - Regional modeling needed for tides and corrections (DAC …)
  - Extrapolation of tide models over coasts is needed if we don't want to loose altimeter measurements. But extrapolation process need to be evaluated (cf Zaron method)

- **S1S2 in DAC/tides**
  - This is an important issue at global and local scale
  - Actual climatologies are old and shall evolve
  - Test of higher resolution atmospheric forcing may help but careful to atmospheric data discontinuities

Summary of Tides/HF signals roundtable

- **SWOT**
  - Calval site in California use gliders in situ measurements
    - Gliders are impacted by IT
    - => need regional OSSEs with assimilation to model/correct this signal
  - Deadline to provide IT correction for SWOT mission ?
    - ~1 year before launch is OK
    - IT correction should be used in standard altimetry soon
  - More in situ validation data would be valuable for IT validation (drifters, gliders …)
  - Need local high resolution tide models on estuaries/rivers + in situ for calibration

- **Incoherent tides**
  - Many initiative to try to model the monthly/annual modulations of IT => to be continued
  - Need to anticipate the assimilation/mapping of SWOT data for IT => this is a challenge
  - MIT GCM simulations are available => should be tested for IT correction (with assimilation)