**Assessment of Jason-2 Orbit Quality Using SSH Cross-Calibration with Jason-1 and Envisat**

**Introduction**: This poster aims at showing results from the Sea Level Height Cross-over analysis to enlighten geographically related patterns or behaviors signing on the ocean altimetric observations using the 3 precise altimetric missions Envisat (EN), Jason-1 (J1) and Jason-2 (J2). This enables to quantify the very good performances of the Jason-2 orbits both in Near Real Time (IGDR) and Delayed time (GDR).

**Cross-calibration with Jason-1 and Envisat**

**Assessment of Jason-2 Orbit Quality Using SSH**

- **Temporal variability**
  - Monitoring of the statistics of Ascending/Descending differences of the Sea Surface Height at cross-over.
  - Cross-overs are averaged over 4°x4° boxes and with a selection on:
    - Bathymetry > 2000m
    - 50°S<Lat<50°N
    - Oceanic variability <20cm

- **Geographic variability**
  - Average of the cyclic average per 4°x4° box smoothed 11x11 boxes
  - Standard deviation of the cyclic average per 4°x4° box smoothed 11x11 boxes

**Variability**

- Small geographical difference
- Variability: Temporal stability improved in GDR (Mean Std: 1.6cm/1.2cm)
- Variability: Reduction of the geographical effect of GDR/IGDR due to the difference POE-MOE
- Geographic Biases: Reduction of the 3.8 mm bias between Asc/Dsc in IGDR for GDR (POE)
- Geographic effect of GDR/IGDR
- Variability: Time stability improved in GDR (Mean Std: 1.9cm/1.4cm)

**To conclude**

- In GDR (with POE), the time variability is:
  - Very much decreased for J1
  - Slightly decreased for J2
  - Almost unchanged for EN

- Compared to the IGDR (MOE) which is consistent with the plots here-above

Further information on the missions comparison can be seen on A.Ollivier et al., Y. Faugere et al. and S. Philips et al. Presentations and posters.