



**Overview** The quality of the orbit ephemerides is crucial for the computation of the Sea Surface Height (SSH). Conversely, analyzing the impact of precise orbit ephemerides on SSH performances enables to describe their impact at different temporal scales and to detect remaining weakness in the orbit solution. This poster synthesizes the quality of the POE-E orbits, with respect to the previous POE-D standard, using mono- and multi-missions diagnosis.





□ the evolutions of gravity field has a positive impact on (Jason-1) regional msl error Geographically correlated errors enable to improve the L2 processing



## Assessment of Orbit Quality through the SSH calculation: POE-E orbit standards. A. Ollivier(CLS), S. Philipps (CLS), A. Couhert (CNES), N. Picot (CNES)

- Cross-over variance analysis highlight a great variance reduction for Jasos-2 (due to reduced dynamic), less sensible for other missions

## **Ocean Surface Topography Science Team Meeting - October 2015**



POE-D (Reference)	POE-E
EIGEN+GRGS.RL02bis_MEAN-FIELD	EIGEN+GRGS.RL03-v2.MEAN- FIELD
one annual, one semi- annual, one drift terms for each year up to deg/ord 50	one annual, one semi- annual, one bias and one drift terms for each year up to deg/ord 80
Radiation pressure model: thermo- optical coefficient from pre-launch box and wing model, with smoothed Earth shadow model	Radiation pressure model: calibrated semi-empirical solar radiation pressure model
DORIS weight is reduced by a factor 10 before DORIS instrument change	SAA DORIS beacons weight is divided by 10 before DORIS instrument change
Doris/Laser/GPS till cycle 169 Doris/Laser after cycle 169	Doris/GPS till cycle 169 Doris after cycle 169

of geographical correlated differences. Small hemispheric differences remain