Hélène
Roinard
CLS, Space Oceanography Division, Toulouse, France
Sabine Philipps, CLS, Space Oceanography Division, Toulouse, France
Michael Ablain, CLS, Space Oceanography Division, Toulouse, France
Pierre Thibaut, CLS, Space Oceanography Division, Toulouse, France
Nicolas Picot, CNES, Centre National d'Etudes Spatiales, Toulouse, France
Poster
In 2012, the whole JASON-2 mission data were reprocessed in GDR-D products version. In addition to the parameters computed by the MLE4 retracking algorithm, several parameters computed by the MLE3 retracking are also provided. Both retracking are based on the same least square principle. MLE3 algorithm estimates three parameters (range, significant wave height, and power) whereas MLE4 estimates four parameters (the three previous ones and the slope of the waveform trailing edge). The aim of this paper is to provide a synthesized overview of the relative performances of the two retracking algorithms highlighting their advantages and weaknesses.
The difference of behavior of the MLE3 and MLE4 parameters will be detailed thanks to various Cal/Val statistics over Jason-2 cycles 1 to 145. The impact on parameters and on valid SSH measurements will also be presented. Concerning the system performance, the variance of SSH crossovers and along-track SLA shows higher values for MLE3 than for MLE4. Our results highlight an important improvement of the performances at time scales less than 10 days when considering a MLE4 rather than a MLE3 algorithm.
This study confirms that using a MLE4 retracking is recommended in the case of Jason-2 measurements. It mainly allows an improvement of the high physical content of SLA for along track distances between 10 and 70 km.
OSTS session
Regional and Global CAL/VAL for Assembling a Climate Data Record
Meeting name
Ocean Surface Topography Science Team (OSTST) Meeting
Download to PDF