Annabelle
Ollivier
CLS
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Poster
Cryosat -2 mission is dedicated to Cryosphere sciences. Nevertheless, it has the potential to be a mission of opportunity for oceanography. Indeed, the satellite embarks an innovative radar altimeter, and high-precision orbit determination (POD), which are expected to be at least as accurate as ENVISAT's. At the end of the year, the IOP/GOP new ESA products dedicated to ocean (Intermediate and Geophysic Ocean Products) will be available to the community.
Yet, since 2011, an ocean Prototype Product (CPP) is delivered by CNES and included in DUACS system. These data enables to demonstrate that the quality of this mission over ocean is indeed of great interest. They will also insure the time continuity before the period of availability of IOP/GOP products.
For this mission, the potential of innovative SAR mode is undoubtable, however, LRM (Low Resolution Mode) mode is also of interest. It complements the other satellite altimetry missions, it provides high latitudes coverage Currently only 3 altimeter satellites are available as inputs of the SALP/DUACS system, making CryoSat data vital to insure level3 and level4 data quality in near real time.
This poster focuses on the LRM data and assesses Cryosat-2 data quality over ocean (using CPP). It quantifies the system performances for the sea level calculation for large and mesoscales… Stability of the different parameters including the Sea Level is also analyzed in order to anticipate the potential of this mission to complete the altimetric time series (when the period is long enough) for the climate studies (notably Sea Level Rise). It also includes preliminary comparisons to other precise altimetric missions (Envisat and Jason-2). They are essential to assess data quality, as well as to allow combination of altimeter for applications and operational oceanography purpose. Finally, concerning the zones where the instrument works in SAR mode, a global assessment is presented, using the Pseudo LRM (PLRM) data. This enables to assess the fact that, with an adapted processing applied on SAR data, the same level of information as LRM can be obtained. Biases and seamless transitions between these modes are discussed.
OSTS session
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