CryoSat Processing Prototype, LRM Processing on CNES Side

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In the frame of the Sentinel3 project, CNES is involved in the overall topography payload product quality.

Like CryoSat, Sentinel3 embarks an altimeter including a conventional LRM mode and a SAR mode. While there is a long experience of LRM data processing, SAR nadir looking data are new and will need extensive prototype development and an in depth validation. Thanks to CryoSat project, 2 long acquisitions of SAR data were performed early June 2010 over the Indian ocean. In addition, SAR data are also acquired in routine over dedicated ocean areas (Algulhas current, Med sea, ...). Those SAR data will be very useful to assess the quality of the SAR processing methods currently under development.

For example, a Cryosat Processing Prototype (C2P) has been developed on CNES side to prepare the CNES SAR ocean retracking study. In order to validate our prototype, the analysis has been conducted first on the LRM data. C2P uses directly the LRM telemetry files and performs the whole processing steps required to derive sea surface information. It is so independent from the PDS official products. The C2P has been validated thanks to the use of Jason-2 data.

This paper will focus on the prototype architecture and validation and will present early results based on Jason-2 and CryoSat data.