



## **SAR Processing on Demand Service for CryoSat-2 and Sentinel-3 at ESA G-POD**

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The scope of this work is to show the new ESA service (SARvatore) for the exploitation of the CryoSat-2 data and upcoming Sentinel-3 data, designed and developed entirely by the Altimetry Team at ESRIN EOP-SER.

The G-POD (Grid-Processing On Demand) Service, SARvatore (SAR Versatile Altimetric Toolkit for Ocean Research & Exploitation) for CryoSat-2, is a web platform that provides the capability to process on-line and on demand CryoSat-2 SAR data, starting from L1a (FBR) data up to SAR Level-2 geophysical data products, with the possibility to build and download the stack data products (L1b-S).

The service is based on SARvatore Processor Prototype and the output data products are generated in standard NetCDF format (using CF Convention), and they are compatible with BRAT (Basic Radar Altimetry Toolbox) and its successor, the up-coming Sentinel-3 Altimetry Toolbox and other NetCDF tools.

Using the G-POD graphic interface, it is possible to easily select the geographical area of interest along with the time of interest.

As of December 2014 the service allows the user to select all available mission data from 2010 to end of 2014, without any geographical restriction on this data.

The processor prototype is versatile in the sense that the users can customize and adapt the processing, according their specific requirements, setting a list of configurable options..

The processing service is meant to be used for research & development scopes, supporting the development contracts, on site demonstrations/training to selected users, cross-comparison against third part products, preparation to Sentinel-3 mission, publications, etc.

So far, the processing has been designed and optimized for open ocean studies and is fully functional only over this kind of surface but there are plans to augment this processing capacity over coastal zones, inland waters and over land in sight of maximizing the exploitation of the upcoming Sentinel-3 Topographic mission over all surfaces.