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SAR Altimetry Processing On Demand Service For CryoSat-2 and Sentinel-3 at ESA G-POD

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The scope of this presentation is to feature the G-POD SARvatore service to users for the exploitation of CryoSat-2 and Sentinel-3 data, which was designed and developed by the R&D Altimetry Team at ESA-ESRIN. The G-POD service coined SARvatore (SAR Versatile Altimetric Toolkit for Ocean Research & Exploitation) is a web platform that allows any scientist to process on-line, on-demand and with user-selectable configuration CryoSat-2 SAR/SARIN and Sentinel-3 SAR data, from L1a (FBR) data products up to SAR/SARin Level-2 geophysical data products.
The G-POD graphical interface allows users to select a geographical area of interest within the time-frame related to the Cryosat-2 SAR/SARin FBR and Sentinel-3 L1A data products availability in the service catalogue. The processor prototype is versatile, allowing users to customize and to adapt the processing according to their specific requirements by setting a list of configurable options. Pre-defined processing configurations (Ocean, Inland Water, Ice and Sea-Ice) are available for the Sentinel-3 service. After the task submission, users can follow, in real time, the status of the processing. The output data products are generated in standard NetCDF format, therefore being compatible with the Multi-Mission Radar Altimetry Toolbox (BRAT, http://www.altimetry.info/toolbox/) and typical tools.
Initially, the processing was designed and uniquely optimized for open ocean studies. It was based on the SAMOSA model developed for the Sentinel-3 Ground Segment. However, since June 2015, a new retracker (SAMOSA+) is offered as a dedicated retracker for inland water, coastal zone, and sea-ice/ice-sheet. The scope is to maximize the exploitation of CryoSat-2 and Sentinel-3 data over all surfaces providing user with specific processing options not available in the default processing chains.
Recent improvements include: 1) A Join & Share Forum to allow users to post questions and report issues; 2) A data repository to better support the growing Altimetry Community avoiding the redundant reprocessing of already processed data.
The service is open, free of charge (supported by the ESA SEOM Programme Element) for worldwide scientific applications and available at https://gpod.eo.esa.int/services/CRYOSAT_SAR