



Data quality assessment of CryoSat products

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The main payload of CryoSat is a Ku band pulsewidth limited radar altimeter, called SIRAL (Synthetic interferometric radar altimeter), that transmits pulses at a high pulse repetition frequency thus making the received echoes phase coherent and suitable for azimuth processing.

This allows to reach a significantly improved along track resolution with respect to traditional pulse-width limited altimeters.

There are three operating modes: low resolution mode (LRM), Synthetic Aperture Radar (SAR) and Synthetic Aperture Radar Interferometric (SARIn). Both the Level 1b and the Level 2 data products are defined depending on the operating mode used by the instrument. However, Level 1b products essentially contain an average echo for each location along the ground track while Level 2 products contains an elevation for each location along the satellite track.

In this poster we will detail as first the different data products and then the quality achieved on those products will be described after more than 2 years of operational activity of the CryoSat satellite.

In particular, the characteristics of the impulse response function in the two direction, the along track and the across track, will be described in order to verify that the performance are in line with expectation as well as stable over the time. To exploit the stability over the 2 years of mission, the products obtained as outcomes of the reprocessing activity will be exploited, allowing to manage an homogeneous set of data processed with the latest version of the CryoSat IPF.