



## **The CRYOSAT-2 Payload Data Ground Segment and Data Processing**

Bjoern Frommknecht, Tommaso Parrinello, and Pascal Gilles

European Space Agency, EOP-GP, Frascati, Italy (bjorn.frommknecht@esa.int)

Selected as the first Earth Explorer Opportunity mission and following the launch failure of Cryosat-1 in 2005, the Cryosat-2 mission was launched on the 8th April 2010 and it is the first European ice mission dedicated to monitoring precise changes in the thickness of polar ice sheets and floating sea ice over a 3-year period.

The main CryoSat-2 mission objectives can be summarised in the determination of the regional and basin-scale trends in perennial Arctic sea ice thickness and mass, and in the determination of regional and total contributions to global sea level of the Antarctic and Greenland Ice. Therefore, the observations made over the life time of the mission will provide conclusive evidence as to whether there is a trend towards diminishing polar ice cover and consequently improve our understanding of the relationship between ice and global climate change.

Scope of this paper is to describe the Cryosat Ground Segment and its main function to satisfy the Cryosat mission requirements. In particular, the paper will discuss the processing steps necessary to produce SIRAL L1b waveform power data and the SIRAL L2 geophysical elevation data from the raw data acquired by the satellite.