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CryoSat: ESA'S ice Explorer Mission. 4 years in operations: status and achievements

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CryoSat-2 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. CryoSat-2 carries an innovative radar altimeter called the Synthetic Aperture Interferometric Altimeter (SIRAL) with two antennas and with extended capabilities to meet the measurement requirements for ice-sheets elevation and sea-ice freeboard. Initial results have shown that data is of high quality thanks to an altimeter that is behaving exceptional well within its design specifications.

The CryoSat mission will reach its 4th years of operational life in April 2014. Since its launch has delivered high quality products to the worldwide cryospheric and marine community that is increasing every year. Scope of this paper is to describe the current mission status and the main scientific achievements in the last twelve months. Topics will also include programmatic highlights and information on the next scientific developments of the mission in its extended period that will be confirmed in autumn 2014.