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New and Future CryoSat Data Products

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Launched in 2010, the European Space Agency's (ESA) polar-orbiting CryoSat satellite was the first SAR/SARin altimeter concept specifically designed to measure changes in the thickness of the sea ice and the elevation of the ice sheets and mountain glaciers. Going beyond its ice-monitoring objective, CryoSat has also demonstrated to be a valuable source of observations for geodesic, hydrologic and oceanographic applications by measuring multi-thematic and high-resolution geophysical parameters. To enable their full scientific and operational exploitation, the CryoSat products continuously evolve and need to be routinely quality-controlled and thoroughly validated. This paper provides an overview of the CryoSat product evolutions and data quality assessment, covering all Cal/Val activities performed by ESA and its partners over the ice and ocean surfaces. A particular focus will be done on the ice Baseline-D data processing upgrades which will include several algorithm evolutions, corrections as well as a new data format (NetCDF) compliant with other space-based observations.