Changelog for CryoSat-2 algorithm v2.2

The generation of sea-ice thickness from CryoSat-2 will resume in October 2019 with an update of the retrieval algorithm and product content. The changes are listed below:

Altimeter Input Data

- CryoSat-2 baseline-D data as primary altimeter data since April 28, 2019. NOTE: In v2.2 the reprocessed grid products consist of a mix between baseline-C and baseline-D

Auxiliary Data

- Use C3S (interim) climate data records of sea ice concentration as auxiliary data for the reprocessed data stream. This fixes an issue with evolving land masks in the OSI-SAF operational products, which will not be reprocessed to a consistent standard. The C3S sea ice type is also known to be more precise in the marginal ice zone

Level-1 Pre-Processor

- Added support for the new ESA baseline-D netCDF format
- Increased the regional subset from 50N – 88N in version 2.1 to 45N – 88N

Level-2 Processor

- Split algorithm between near-real time and reprocessed with timeliness dependent choice of validation data
- Removed requirement of having a minimum of 3 leads in each orbits.
- Added sea ice draft and sea ice draft uncertainty as output variables
- Renamed freeboard to sea ice freeboard to be in line with the variables standard name

Level-3 Processor

- Added sea ice draft and sea ice draft uncertainty as output variables
- Renamed freeboard to sea ice freeboard to be in line with the variables standard name
- Removed the average Level-2 orbit based uncertainty for radar freeboard, sea-ice freeboard and sea-ice thickness
- All statistical variables are now named with a "stat_" prefix in the variable name for clarity
- Added temporal statistics variables (see Temporal Coverage per grid cell5.2)
- Added the fraction of negative thicknesses per grid cell as statistical parameter
- Added geotiff output (variable sea-ice thickness only) for all gridded products