AWI CryoSat-2 v2.5 pre-announcement

Production of the near real-time AWI CryoSat-2 sea ice thickness product will start shortly.

Preliminary list of updates compared in v2.5:

1. New surface type classification (sea ice / lead / open ocean discrimination). The new surface type classification increases the number of waveforms for sea ice freeboard/thickness evaluation.
2. New flag indicating surface wave influence in the marginal ice zone. Surface waves that penetrate into the sea ice lead to a roughening of the surface and a freeboard bias. This bias is now detected based on waveform properties and the distance to open water from sea ice concentration data.
3. Update region code to 2021 NSIDC regional mask for Arctic sea ice trends and climatologies (credit J. Scott Stewart and Walter N. Meier, NSIDC)
4. Open Ocean data from CryoSat-2 pulse-limited radar mode (LRM) is included, but not yet used for estimation of sea surface height
5. Fixed issue with connecting data from the same orbit that was distributed over different files. The issue has caused data loss and degraded sea surface height information (see https://github.com/pysiral/pysiral/issues/91)
6. Fixed issue with computing pulse peakiness for noisy waveforms. This issue has caused incorrect surface type classifications (https://github.com/pysiral/pysiral/issues/89)