DORIS / Jason-2: better than 5 cm real-time orbits are available for Near Real-Time Altimetry

An improved DORIS receiver …

- DORIS DGXX receivers
  - Already in flight on-board Jason-2 and CryoSat-2, future flights: Pléiades, Saral/Altika and HY-2
  - Number of channels increased from 2 to 7
  - New spectral analysis mode (improving cold start)
- A LOT OF SYSTEM IMPROVEMENTS, including:
  - DORIS is able to program the altimeter by delivering the expected height of the sea surface in real-time, allowing reduction of tracking loops
  - DORIS measurements available under a clear RINEX format
  - EGSE now allow ground-demonstration of the DORIS receiver centimeter capability before the launch.
  - …
- Jason-2 Precise Orbit Ephemeris show a less-than-one-centimeter accuracy.

… allow an accurate DIODE Navigation Tool

- On ground before the flight, it was shown that the navigation tool was compliant with 1 cm instrumental errors (of course 1 cm was not expected in-flight).
- On Jason-2, the specifications were “below 10 cm RMS on the Radial component” when compared to the the Precise Orbit Ephemeris (POE).
- The real-time DIODE orbits are delivered in the OGDR products and their accuracy has been improved with a new version of the on-board software.
- 100% availability, even during large manoeuvres = a very robust function

… flying over a dense and active DORIS beacon network …

OGDR ALTITUDE IS WELL WITHIN ITS SPECIFICATIONS NOW: accuracy between 2 and 4 cms RAD. RMS today

- DORIS participation to precise Near Real-Time Altimetry.