# DORIS / DIODE : Recent improvement

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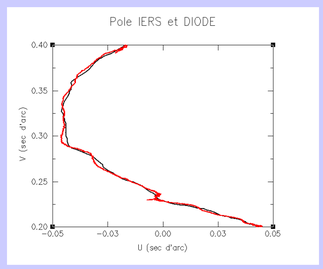
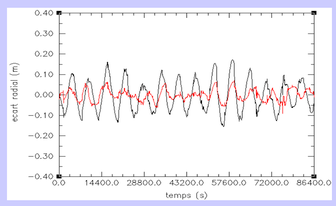
Current model improvements (suggested by comparisons with POE) are being integrated in future DGXX-S DORIS versions (Jason-3, Sentinel-3, …) :

- albedo & infra-red pressure,
- ITRF 2008,
- pole prediction,
- Hill Along-Track empirical acceleration,
- on-board USO frequency prediction,
- …




… plus a dense and active DORIS beacon network …

Daily monitoring by the DORIS INTEGRITY TEAM

… allow a more and more accurate DIODE Navigation Tool

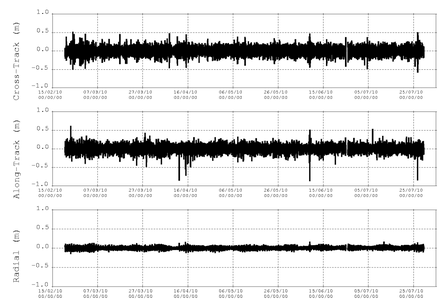
- J2000 position and velocities delivered to the AOCS (CryoSat-2), as well as TAI time-tagging of platform Tops
- On Jason-2, the expected accuracy was “below 10 cm RMS on the Radial component “ when compared to the Precise Orbit Ephemeris (POE) : 3.3 cm achieved.
- The real-time DIODE orbits are available for NRT products
- More than 99.9% availability, even during large manoeuvers = a very robust function

Current development version has an accuracy of 2.55 cm (RAD RMS over six months)

(6.44cm A-T, 6.06cm C-T, 9.2cm 3D)

- **DORIS participation to precise Near Real-Time Altimetry.**
- **On-board Jason-2, OGDR Altitude is between 2 and 4 cms RAD RMS today. On-board CryoSat-2, a new version is going to be uploaded, giving the same order of magnitude.**

Jason-2 on-board ITRF positions compared with DORIS P.O.E.




STATISTICS

RMS = 0.092 m
MAX = 0.583m

RMS = 0.078 m
MAX = 0.868 m

RMS = 0.033 m
MAX = 0.171 m