

Jason-2 Version 'T' Geophysical Data Records: Public Release

Dear Altimetry Data Users,

We are pleased to announce the release of the Jason-2/OSTM Geophysical Data Records (GDRs), version 'T'. The version 'T' calibration/validation GDRs have been extensively validated by the Ocean Surface Topography Science Team (OSTST), who found that these GDRs are demonstrating excellent data quality, and consistency with the Jason-1 version 'c' GDRs. As a result, at their June 2009 meeting in Seattle, the OSTST recommended release of the Jason-2/OSTM Version 'T' GDRs as is.

The public are invited to proceed with analyses based on this version 'T' release of the Jason-2 GDRs. All Jason-2 version 'T' GDRs since launch, 20-Jun-2008, are available from the following two sources:

- 1) CNES/AVISO's site: <http://www.avisooceanobs.com/index.php?id=1458>
- 2) NOAA's CLASS site: <http://www.class.noaa.gov>

Instructions for data access are included in the Jason-2 User's Handbook which can also be found at the following sources:

- 1) <ftp://avisoftp.cnes.fr/AVISO/pub/jason-2/documentation/handbook>
- 2) http://www.class.ncdc.noaa.gov/release/data_available/jason/userhandbook.pdf
- 3) http://www.eumetsat.int/Home/Main/What_We_Do/Satellites/Jason/Services

The User's Handbook also provides recommended criteria to edit the data.

A summary of the known inconsistencies between the Jason-2 version 'T' and Jason-1 version 'c' GDRs is as follows.

Inconsistencies between Jason-2 version 'T' and Jason-1 version 'c' GDRs

1. The Jason-2 Ku-band sigma-0 is biased by ~ -0.15 dB with respect to (w.r.t.) those from Jason-1.
2. As a result of (1), the wind speeds from Jason-2 are biased by $\sim +0.4$ m/s w.r.t. Jason-1, and the standard deviation of the differences is 0.5 m/s.
3. The Jason-2 Ku- and C-band altimeter range measurements are biased by ~ -83 and ~ -132 mm w.r.t. those from Jason-1.
4. As a result of (4), the dual frequency ionosphere corrections from Jason-2 are biased by $\sim +8$ mm bias w.r.t. Jason-1.
5. As a result of (4) and (5), the sea surface heights from Jason-2 are biased by $\sim +75$ mm w.r.t. to those from Jason-1.

6. The Jason-2 GDR backscatter (σ^0) values are slightly noisier than the Jason-1 GDR σ^0 values. A discussion of the issue, including an empirical correction technique, is presented by Graham Quartly in "Improving the intercalibration of σ^0 values for the Jason-1 and Jason-2 altimeters":

http://eprints.soton.ac.uk/66226/01/Quartly_GRSL_Psi2_6pp.pdf

There are a few known minor issues with some fields in the version 'T' GDRs. These are noted below. These issues are expected to be corrected in the Jason-2 version 'c' GDRs, which will be released in 2010.

Issues & Limitations with Jason-2 Version 'T' GDRs

1. The following flags should be ignored in the version 'T' GDRs, due to known algorithm/processing anomalies:
 - a) rain_flag
 - b) qual_alt_1hz_off_nadir_angle_pf
 - c) interp_flag_tb
 - d) qual_inst_corr_1hz_sig0_c
2. The non-equilibrium long period ocean tide values are in error and should not be used. This error also exists in the Jason-1 Version 'c' GDRs.
3. The pole-tide values are incorrect over inland seas & lakes and should be multiplied by a factor 0.468 in these regions. The error also exists in the Jason-1 Version 'c' GDRs.

Most of these issues are expected to have minor impact on the use of the version 'T' GDRs.

Best Regards,

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