

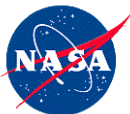
Surface Water and Ocean Topography (SWOT) Project

Release Note Version S 2.01 Geophysical Data Record Release

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SWOT is a joint mission between NASA and CNES and was launched on December 16, 2022. The onboard nadir altimeter (NALT) is a Jason-class dual frequency (Ku/C) altimeter.

This release includes the version S 2.01 SWOT NALT Operational Geophysical Data Record (OGDR), Interim Geophysical Data Record (IGDR) and Geophysical Data Record (GDR).

Product description documents for these products can be found at:

<https://podaac.jpl.nasa.gov/swot?tab=datasets>

Users are advised of the following changes to the datasets:

1. Transition dates from GDR-F 1.04 to GDR-S 2.01 are:
 - a. **OGDR**: May 5, 2025 (cycle 32, pass 221, sensing time 20250505_221058).
 - b. **IGDR**: May 5, 2025 (first product: cycle 32, pass 223, sensing time 20250505_231228).
 - c. **GDR**: February 24, 2025 (first product: cycle 29, pass 001, sensing time 20250224_103601).
2. Reprocessed GDR-S 2.01 observations from the start of the mission (January 16, 2023) through the end of cycle 28 (~February 23, 2025) is ongoing and scheduled to be released in late June 2025.

Users are advised of the following differences between the OGDR, IGDR and GDR products:

- The **OGDR** is a non-validated product that is available with a typical latency of < 7 hours.
- The **IGDR** is not a fully validated product that is available with a typical latency of < 2 days.
- The **GDR** is a validated product that will become available with a typical latency of < 45 days after the start of release.

The **GDR-S 2.01 standard** is the new standard applicable to **SWOT Level 2 NALT products**. The modifications relative to the previous **GDR-F 1.04 standard** are detailed below.

The SWOT Level 2 NALT Version “S” products are available at AVISO and PO.DAAC as follows:

AVISO

The NALT Version “S” products in this release can be accessed on the [AVISO web portal](#) and through the [CNES AVISO Data Archiving Center's catalog](#), accessible directly using AVISO credentials. Further information on SWOT data access can be found via the dedicated webpage on AVISO web portal: <https://www.aviso.altimetry.fr/en/missions/current-missions/swot/access-to-data.html>.

They can be accessed via FTP/SFTP and a THREDDS Data Server (TDS).

CNES AVISO FTP/SFTP (with AVISO credentials only):

- FTP access: <ftp-access.aviso.altimetry.fr:21/>
- SFTP access: <sftp://ftp-access.aviso.altimetry.fr:2122/>

FTP/SFTP Server Directory Main Tree

- /geophysical_data_record/swot/*gdr_s

CNES AVISO TDS (no credentials required):

- TDS access: <https://tds-odatis.aviso.altimetry.fr/thredds/catalog.html>

TDS Directory Main Tree

- <https://tds-odatis.aviso.altimetry.fr/thredds/catalog/L2/L2-SWOT-DATA/L2-SWOT.html>

The NALT (O/I)GDR products in this release are listed below along with the corresponding Digital Object Identifier (DOI) landing pages:

Poseidon-3C Nadir Altimeter

* SWOT_L2_NALT_OGDR (<https://doi.org/10.24400/527896/a01-2023.006>)

* SWOT_L2_NALT_IGDR (<https://doi.org/10.24400/527896/a01-2023.005>)

* SWOT_L2_NALT_GDR (<https://doi.org/10.24400/527896/a01-2023.009>)

PODAAC

The NALT Version “S” datasets in this release are available through NASA Earthdata Search client (https://search.earthdata.nasa.gov/search?q=SWOT_*_D) and downloadable using [PO.DAAC scripts](#) by their unique collection IDs as shown in the table below. At PODAAC, these NALT products are provided in Version “D” data collections to correspond with the coincident release of SWOT Version “D” KaRIn products. Similarly, the dedicated Version D Radiometer (RAD) products corresponding to this release are also available at PO.DAAC as shown in the table below. NALT and RAD products are also available through [OPeNDAP](#).

NASA PO.DAAC Collection ID	Dataset Name	Example data access script (Obtain PO.DAAC data download tool)
SWOT_L2_NALT_OGDR_D DOI: 10.5067/SWOT-NALT-OGDR-D	Level 2 Nadir Altimeter Operational Geophysical Data Record	OGDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_NALT_OGDR_D -d ./SWOT_L2_NALT_OGDR_D/ -- start-date 2025-05-01T00:00:00Z --end-date 2025-05- 31T23:59:59Z
SWOT_L2_NALT_IGDR_D DOI: 10.5067/SWOT-NALT-IGDR-D	Level 2 Nadir Altimeter Interim Geophysical Data Record	IGDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_NALT_IGDR_D -d ./SWOT_L2_NALT_IGDR_D/ -- start-date 2025-05-01T00:00:00Z

		--end-date 2025-05-31T23:59:59Z
SWOT_L2_NALT_GDR_D DOI: 10.5067/SWOT-NALT-GDR-D	Level 2 Nadir Altimeter Geophysical Data Record	GDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_NALT_GDR_D -d ./SWOT_L2_NALT_GDR_D/ --start-date 2025-05-01T00:00:00Z --end-date 2025-05-31T23:59:59Z
SWOT_L2_RAD_OGDR_D DOI: 10.5067/SWOT-RAD-OGDR-D	Level 2 Radiometer Operational Geophysical Data Record	OGDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_RAD_OGDR_D -d ./SWOT_L2_RAD_OGDR_D/ --start-date 2025-05-01T00:00:00Z --end-date 2025-05-31T23:59:59Z
SWOT_L2_RAD_IGDR_D DOI: 10.5067/SWOT-RAD-IGDR-D	Level 2 Radiometer Interim Geophysical Data Record	IGDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_RAD_IGDR_D -d ./SWOT_L2_RAD_IGDR_D/ --start-date 2025-05-01T00:00:00Z --end-date 2025-05-31T23:59:59Z
SWOT_L2_RAD_GDR_D DOI: 10.5067/SWOT-RAD-GDR-D	Level 2 Radiometer Geophysical Data Record	GDR products for 2025-05-01 to 2025-05-31: podaac-data-downloader -c SWOT_L2_RAD_GDR_D -d ./SWOT_L2_RAD_GDR_D/ --start-date 2025-05-01T00:00:00Z --end-date 2025-05-31T23:59:59Z

Resources for users of SWOT datasets distributed by the PO.DAAC

- [PO.DAAC Cookbook - SWOT Chapter](#)
- [PO.DAAC Data Subscriber/Downloader \(video tutorial\)](#)

1 Changes Synthesis

1.1 Model Changes

Impact on-flow & reprocessed data:

- **MSS CNES-CLS:** Upgraded from MSS_CNES_CLS_2015 to 2023 CNES/CLS/SIO/DTU HYBRID.

- **MSS DTU:** Upgraded from DTU-2015 to DTU-2021.
- **MDT:** Upgraded from MDT-CNES-CLS-2018 to MDT-CNES-CLS-2022.
- **Long-period equilibrium ocean tide (ocean_tide_eq):** Updated to conserve mass.
- **FES tide model:** Upgraded from 2014B to 2022B (impact on FES ocean & load tides (ocean_tide_fes, ocean_tide_non_eq, load_tide_fes)).
- **GOT tide model:** No change to short period tide model, but ocean_tide_got impacted by an update to long-period equilibrium ocean tide).
- **Surface Type:** Upgraded to use of *surface_type_7states_20230717T102530_v101.nc*.
- **Geoid:** Fixes anomaly in implementation of EGM 2008 geoid.

1.2. Processing Changes

Impact on-flow & reprocessed data:

- Adjustment on MLE4 Wind-Speed Sig0 bias.
- Improved radiometer calibration coefficients to improve alignment between two sides.
- MDT Interpolation upgrades from spline to bi-linear.
- Improvement on *rad_wet_tropo_cor_interp_qual* flag to better detect radiometer interpolation artifacts.
- Correction of an anomaly in Range Rate reconstruction.

Impact reprocessed data only:

- Update of antennae aperture value in ground processing for Calval Phase (was already active for Science Phase).
- Update of instrumental LUT with new antenna aperture for Calval Phase (was already active for Science Phase).
- New AGC correction table in PSWOT_CH1 for Calval Phase (was already active for Science Phase).
- Benefit from USO_drift DAD improvement between June 2023 and September 2023.

1.3. Format Changes

Impact on-flow & reprocessed data:

- **Filename change:** f→s
 - Format:
SWOT_<O/I/G>P<N/R/S>_2P<v><S/P><ccc>_<ppp>_<yyyymmdd_hhnnss>_<yyyymmdd_hhnnss>.nc
 - <v> updates from f to s
- **Global attribute source:** Processing Baseline S v2.01
- **Minor evolution on comments:**
 - model_dry_tropo_cor_measurement_altitude:comment.
 - model_wet_tropo_cor_measurement_altitude:comment.
- **Minor typo evolution on long_name:**
 - rad_wet_tropo_cor_interp_qual:long_name.

