

QA4EO Daily Report for GOP data:

<u>08/10/2022</u>

IDEAS-QA4E0

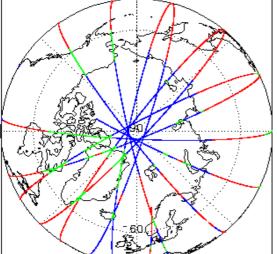
| an art Draduation. | 10 Nov 0000 | Check | L1 & L2 | P2P |
|---|----------------------------------|--|------------------------------|------------------------------|
| eport Production: | 16-Nov-2022 | Server check: science-pds.cryosat.esa.int | Nominal | Nominal |
| Processor Used: CrvoSat Ocean Processor | Crucest Ocean Brasses | Server check: calval-pds.cryosat.esa.int | Nominal | Nominal |
| rocessor used: | CryoSat Ocean Processor | Product Software Check | Nominal | Nominal |
| Data Used: Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data | Geophysical Ocean Products (GOP) | Product Format Check | Nominal | Nominal |
| | L1B, L2 & P2P Science Data | Product Header Analysis | See Sections 4.2 and 5.2 | See Section 6.2 |
| | | Auxiliary Data File Usage Check | See Section 4.3 and 5.3 | See Section 6.3 |
| | | Auxiliary Correction Error Check | See Section 5.4 | See Section 6.4 |
| | | Measurement Confidence Data Check | See Section 4.5, 4.6 and 5.5 | See Section 6.5 |
| | | Range, SWH & Backscatter Measurement Check | See Section 5.6 | See Section 6.6 |
| | | Ocean Retracking Quality Check | See Section 5.7 | See Section 6.7 |
| | | QCC Error/ Warning Check | See Section 7.1, 7.2 and 7.3 | See Section 7.1, 7.2 and 7.3 |

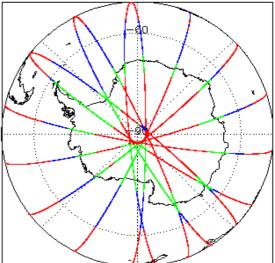
1. Overview

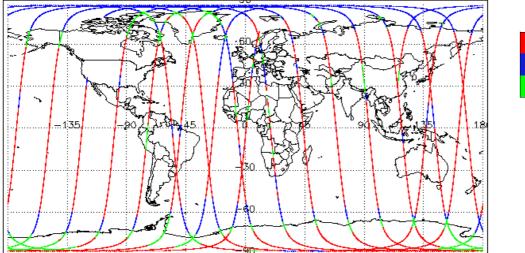
| Mission / Instrument News | | |
|---------------------------|--|--|
| 07-Oct-2022 | Unplanned SIRAL unavailability from 07/10/2022 15:32:31 to 08/10/2022 07:16:55 | |
| 08-Oct-2022 | Unplanned SIRAL unavailability from 07/10/2022 15:32:31 to 08/10/2022 07:16:55 | |
| 09-Oct-2022 | Nothing planned | |

2. Global Coverage













3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

The SIRAL instrument configuration for the day of acquisition is provided below.

4. GOP Level 1B Data Quality Check

4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a NetCDF product file (.nc).

| 4.2 L1B Product Header Analysis | | | | | |
|--|-------------------------------------|--|--|--|--|
| For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. | | | | | |
| L1B Processing Quality HR: The l1b_proc_flag_hr flag is currently set all L1B 0 | OPR and GOPN products bec | ause the I1b_processing_quality_hr field is not correctly configured in the OSAR and | | | |
| OSARIn chains. A modification is required in the next release. | | | | | |
| Number of products with errors: 0 | | | | | |
| 4.3 L1B Auxilary Data File Usage Check | | | | | |
| Each product is checked for missing Data Set Descriptors with respect to a pre-c | letermined baseline and also to | check the validity of Auxiliary Data Files is correct. | | | |
| Number of products with errors: 0 | | | | | |
| 4.4 L1B Auxiliary Correction Error Check | | | | | |
| | The hit value of this flow indicat | | | | |
| CryoSat L1B data includes a correction error flag for each measurement record. Number of products with errors: 0 | The bit value of this hag indicat | es any problems when set. | | | |
| | | | | | |
| 4.5 L1B Measurement Confidence Data Check | | | | | |
| CryoSat L1B data includes a measurement confidence flag for each measurement | nt record. The bit value of this f | ag indicates any problems when set. | | | |
| Attitude Correction Missing: This flag is currently set in error for GOPR produc | ts due to a configuration issue. | This is being investigated and will be updated in the next SW update. | | | |
| Number of products with errors: 2 | | | | | |
| Product | Test Failed | Description | | | |
| CS_OFFL_SIR_GOPM1B_20221008T170025_20221008T170315_C001 | Power scaling error | There is an error in the scaling of the L1B waveform for one or more records | | | |
| CS_OFFL_SIR_GOPM1B_20221008T230332_20221008T231555_C001 | Power scaling error | There is an error in the scaling of the L1B waveform for one or more records | | | |
| | | | | | |
| 4.6 L1B Waveform Group Data Check | | | | | |
| CryoSat L1B data includes a waveform data flag for each measurement record. | - | es any problems when set. | | | |
| Loss of Echo Flag: This flag is currently set for some products over land, but the | is is to be expected. | | | | |
| Number of products with errors: 15 | | | | | |
| Product | Test Failed | Description | | | |
| CS_OFFL_SIR_GOPM1B_20221008T162551_20221008T164458_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPM1B_20221008T170025_20221008T170315_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPM1B_20221008T221050_20221008T222427_C001 | Loss of Echo Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPM1B_20221008T231938_20221008T233544_C001 CS_OFFL_SIR_GOPN1B_20221008T103532_20221008T103725_C001 | Loss of Echo | The tracking echo is missing for one or more records The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPN1B_20221008T111118_20221008T111729_C001 | Loss of Echo | The tracking cono is missing for one or more records | | | |
| CS_OFFL_SIR_GOPN1B_20221008T134947_20221008T135444_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPN1B_20221008T202039_20221008T202335_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPN1B_20221008T233545_20221008T233800_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPN1B_20221008T233936_20221008T234151_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPR1B_20221008T102401_20221008T103001_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPR1B_20221008T120609_20221008T120753_C001 | Loss of Echo | The tracking echo is missing for one or more records | | | |
| CS_OFFL_SIR_GOPR1B_20221008T143045_20221008T143305_C001 CS_OFFL_SIR_GOPR1B_20221008T154234_20221008T154338_C001 | Loss of Echo Loss of Echo | The tracking echo is missing for one or more records The tracking echo is missing for one or more records | | | |
| | 1 | | | | |
| 5. GO | P Level 2 Data Qua | ality Check | | | |
| 5.1 L2 Product Format Check | | | | | |
| Each product, retrieved and unpacked from the science server, is checked to en | sure it consists of both an XML | header file (.HDR) and a NetCDF product file (.nc). | | | |
| Number of products with errors: 0 | | | | | |
| | | | | | |
| 5.2 L2 Product Header Analysis | | | | | |
| For all products, a series of pre-defined checks are performed on the MPH and S | PH in order to identify any inco | nsistencies and/or errors raised by the ground-segment processing chain. | | | |
| Number of products with errors: 0 | | | | | |
| 5.3 L2 Auxiliary Data File Usage Check | | | | | |
| J.J LZ Adxillary Data The Usage Check | | | | | |
| Each product is checked for missing Data Set Descriptors with respect to a pre-c | letermined baseline and also to | check the validity of Auxiliary Data Files is correct. | | | |
| Number of products with errors: 0 | | | | | |
| 5.4 L2 Auxiliary Correction Error Check | | | | | |
| | and for the defends owner vehice (C | 0707) | | | |
| For all products, the auxiliary corrections within the Geophysical Group are check Currently, there are some common auxiliary correction errors raised in the followed by a table highlighting any additional issues that may arise from t | Level 2 products that are exp | ected, due to surface type. All common flags are summarised in the list below, | | | |
| > ECMWF Meteo Corrections: Currently the following corrections are not comp | uted over CONTINENTAL ICE: | Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric y (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are | | | |
| > Sea State Bias & Sea State Bias PLRM: The error value is currently set for p | roducts over sea ice, but this is | to be expected. | | | |
| > Altimetric Wind Speed Error: The error value is currently set for products over | | | | | |
| Number of products with errors: 39 | | | | | |
| | Tost Failed | Description | | | |
| Product | Test Failed | Description | | | |

| CS_OFFL_SIR_GOPM_2_20221008T121656_20221008T123041_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
|---|---|--|
| CS_OFFL_SIR_GOPN_2_20221008T075512_20221008T075626_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T080123_20221008T080445_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T093600_20221008T093836_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T094029_20221008T094655_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T103114_20221008T103234_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T111118_20221008T111729_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T121033_20221008T121137_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T134947_20221008T135444_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T152242_20221008T152321_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T161424_20221008T161631_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T175223_20221008T175540_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T180102_20221008T180220_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T193114_20221008T193434_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T193957_20221008T194121_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T202039_20221008T202335_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T211816_20221008T211951_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T220136_20221008T220236_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T225550_20221008T225757_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T233936_20221008T234151_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T084437_20221008T085114_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T085114_20221008T085457_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T102401_20221008T103001_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T103001_20221008T103113_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T105335_20221008T105549_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T120404_20221008T120536_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T120609_20221008T120753_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T120753_20221008T121033_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T134238_20221008T134338_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T134338_20221008T134947_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T152501_20221008T153009_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T165259_20221008T165410_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T165413_20221008T165456_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |

| CS_OFFL_SIR_GOPR_2_20221008T165834_20221008T170024_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography (solution 1) for one or more records |
|---|--|---|
| CS_OFFL_SIR_GOPR_2_20221008T170401_20221008T171208_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T184245_20221008T185117_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T202336_20221008T203037_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T220236_20221008T220820_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the GPD Wet Tropospheric correction, the MSS height (solution 1) and tidal corrections for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T234151_20221008T234836_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |

5.5 L2 Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag for each 20 Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

| Product | Test Failed | Description |
|---|---------------------|---|
| CS_OFFL_SIR_GOPM_2_20221008T170025_20221008T170315_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T230332_20221008T231555_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20 Hz)

CryoSat L2 data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common flags raised in the Level 2 products, which are summarised below. The table provides the full list of products flagged.

> Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags: These flags are currently set for some records over ocean.

> OCOG Altimeter Range and Backscatter Quality Flags: These flags are currently set for some records over continental ice.

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| Product | Test Failed | Description |
|---|--|---|
| CS_OFFL_SIR_GOPM_2_20221008T071655_20221008T072001_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T073431_20221008T075044_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T075627_20221008T080123_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T080823_20221008T084105_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T084133_20221008T084354_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T090430_20221008T092902_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T093836_20221008T094028_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T094810_20221008T095441_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T100023_20221008T100450_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T100932_20221008T101732_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T101736_20221008T102057_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T103235_20221008T103532_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T103726_20221008T105335_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T105549_20221008T111036_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T111730_20221008T111942_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |

| CS_OFFL_SIR_GOPM_2_20221008T112713_20221008T114120_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
|---|--|---|
| CS_OFFL_SIR_GOPM_2_20221008T114259_20221008T115940_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T121656_20221008T123041_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T123742_20221008T125059_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T125523_20221008T130346_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T130715_20221008T132849_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T133411_20221008T133446_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T133550_20221008T133716_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T140451_20221008T140811_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T140813_20221008T143044_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T143710_20221008T144203_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T144758_20221008T151049_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T152321_20221008T152355_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T154338_20221008T160842_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T161352_20221008T161423_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T161632_20221008T162229_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T162551_20221008T164458_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T164500_20221008T165234_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T170025_20221008T170315_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T171523_20221008T174746_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T175540_20221008T180101_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T181146_20221008T181518_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T183856_20221008T184244_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T185428_20221008T190344_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T190630_20221008T192750_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T193550_20221008T193956_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
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| CS_OFFL_SIR_GOPM_2_20221008T194520_20221008T195501_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
|---|--|---|
| CS_OFFL_SIR_GOPM_2_20221008T195649_20221008T200250_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T203121_20221008T210630_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T210943_20221008T211443_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T212543_20221008T215712_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T221050_20221008T222427_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T222841_20221008T222954_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T223001_20221008T224605_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T224833_20221008T225342_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T225419_20221008T225549_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T230332_20221008T231555_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPM_2_20221008T231938_20221008T233544_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T182316_20221008T182500_C001 | OCOG Altimeter Range Quality, OCOG Backscatter Quality | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| | | |

L2 Quality Flags (20 Hz PLRM)

Currently, there are several common flags raised in the Level 2 products, which are summarised below. The table provides the full list of products flagged.

> Ocean Altimeter Range, SSHA, SWH and Backscatter PLRM Quality Flags: These flags are currently set for occasional records over sea ice.

> OCOG Altimeter Range and Backscatter PLRM Quality Flags: These flags are currently set for occasional records over continental ice.

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| Product | Test Failed | Description |
|---|---|---|
| CS_OFFL_SIR_GOPN_2_20221008T073120_20221008T073431_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T093600_20221008T093836_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T094029_20221008T094655_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T103114_20221008T103234_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T103532_20221008T103725_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T111118_20221008T111729_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T112443_20221008T112618_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T121033_20221008T121137_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T123250_20221008T123742_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T130347_20221008T130534_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |

| CS_OFFL_SIR_GOPN_2_20221008T133023_20221008T133411_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
|---|---|---|
| CS_OFFL_SIR_GOPN_2_20221008T134947_20221008T135444_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T143305_20221008T143424_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T143621_20221008T143710_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T161232_20221008T161352_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T162230_20221008T162359_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T175223_20221008T175540_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T182316_20221008T182500_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T183456_20221008T183458_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T183759_20221008T183855_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T185117_20221008T185427_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T193957_20221008T194121_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T200250_20221008T200453_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T202039_20221008T202335_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T211816_20221008T211951_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T224653_20221008T224832_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T225550_20221008T225757_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPN_2_20221008T235709_20221008T235911_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T072403_20221008T072550_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T075045_20221008T075512_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T080446_20221008T080823_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T084437_20221008T085114_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T092902_20221008T093600_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T120404_20221008T120536_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T120753_20221008T121033_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T130535_20221008T130715_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
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| CS_OFFL_SIR_GOPR_2_20221008T132849_20221008T132955_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
|---|---|---|
| CS_OFFL_SIR_GOPR_2_20221008T140230_20221008T140451_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T152205_20221008T152242_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T154234_20221008T154338_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T160842_20221008T161231_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T165259_20221008T165410_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T165834_20221008T170024_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T170401_20221008T171208_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T174746_20221008T175222_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T180221_20221008T180624_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T182939_20221008T183340_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T183545_20221008T183739_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T184245_20221008T185117_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T192751_20221008T193114_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T194121_20221008T194520_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T201559_20221008T201801_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T202336_20221008T203037_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T203046_20221008T203120_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T211951_20221008T212310_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T220236_20221008T220820_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T220834_20221008T220945_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |
| CS_OFFL_SIR_GOPR_2_20221008T225758_20221008T230331_C001 | Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records |
| CS_OFFL_SIR_GOPR_2_20221008T231725_20221008T231938_C001 | OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality | The OCOG Range and Backscatter Quality Flags have been set for one more records |

Currently, there are several common flags raised in the Level 2 products, which are summarised below.

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> 1 Hz and 1 Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected.

Number of products with errors:

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20 Hz)

CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.

Number of products with errors:

L2 Retracking Flags (20 Hz PLRM)

CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz PLRM measurement record. The bit value of this flag indicates any problems when set.

Ocean Retracking Quality Flag (PLRM): This flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.

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Number of products with errors:

6. GOP L2 Pole-to-Pole Data Quality Check

6.1 P2P Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a NetCDF product file (.nc).
Number of products with errors:
0

Number of products with errors.

6.2 P2P Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors:

6.3 P2P Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.
Number of products with errors:
0

6.4 P2P Auxiliary Correction Error Check

For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).

Currently, there are some common auxiliary correction errors raised in the Level 2 products that are expected, due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues that may arise from this test.

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

> Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

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| Product | Test Failed | Description |
|--|---|--|
| CS_OFFL_SIR_GOP_2_20221008T071104_20221008T080041_C001 | Mean Dynamic Topography (1) | There is an error with the Mean Dynamic Topography height for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T080041_20221008T085019_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T085019_20221008T093955_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T093955_20221008T102934_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T102934_20221008T111910_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T111910_20221008T120848_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T120848_20221008T125825_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T125825_20221008T134803_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T134803_20221008T143739_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T143739_20221008T152718_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T152718_20221008T161654_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T161654_20221008T170633_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T170633_20221008T175609_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T175609_20221008T184547_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_220221008T184547_20221008T193523_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T193523_20221008T202502_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) | There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records |

| | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
|--|--|---|
| CS_OFFL_SIR_GOP_220221008T211438_20221008T220417_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS OFFL SIB GOP 2 202210081220417 202210081225353 C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| CS_OFFL_SIR_GOP_220221008T225353_20221008T234331_C001 | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| | Mean Sea Surface (1), Mean Dynamic Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records |
| | | |

6.5 P2P Measurement Confidence Data Check

CryoSat P2P data includes a measurement confidence flag for each 20 Hz measurement record. The bit value of this flag indicates any problems when set.

| Number of products with errors: 2 | | |
|--|---------------------|---|
| Product | Test Failed | Description |
| CS_OFFL_SIR_GOP_220221008T161654_20221008T170633_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |
| CS_OFFL_SIR_GOP_2_20221008T225353_20221008T234331_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |

| 6.6 P2P Measurement Quality Flag Check | | | |
|---|---|--|--|
| P2P Quality Flags (20 Hz) | | | |
| CryoSat P2P data includes Quality Flags for | each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products. | | |
| Since the P2P Quality Flags are copied d | irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. | | |
| Number of products with errors: | 20 | | |
| P2P Quality Flags (20 Hz PLRM) | | | |
| Since the P2P Quality Flags are copied d | irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. | | |
| Number of products with errors: | 21 | | |
| P2P Quality Flags (1 Hz & 1 Hz P | 'LRM) | | |
| Since the P2P Quality Flags are copied d | irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. | | |
| Number of products with errors: | 21 | | |
| 6.8 P2P Ocean Retracking Qu | ality Check | | |
| P2P Retracking Flags (20 Hz) | | | |
| Cryosat P2P data includes an ocean retrack | ing quality flag (field 19) for each 20 Hz measurement record. The bit value of this flag indicates any problems when set. | | |
| Ocean Retracking Quality Flag (PLRM): T | his flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected. | | |
| Number of products with errors: | 20 | | |
| | | | |
| P2P Retracking Flags PLRM | | | |
| 00 | ng quality flag for each 20 Hz PLRM measurement record. The bit value of this flag indicates any problems when set. | | |
| CryoSat L2 data includes an ocean retrackir | ng quality flag for each 20 Hz PLRM measurement record. The bit value of this flag indicates any problems when set. This flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected. | | |