

### **QA4EO Daily Report for GOP data:**

<u>09/02/2023</u>

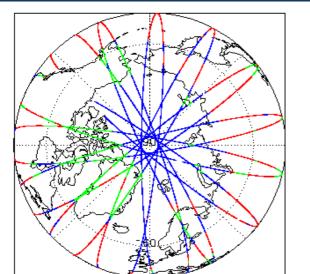
# IDEAS-QA4E0

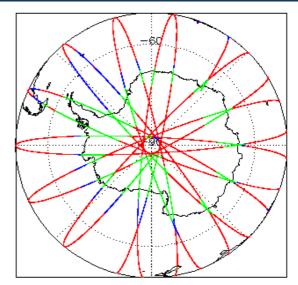
| an art Draduation.             | 10 Mar 2000                        | Check                                      | L1 & L2                      | P2P                         |
|--------------------------------|------------------------------------|--|------------------------------|-----------------------------|
| Report Production: 10-Mar-2023 |                                    | Server check: science-pds.cryosat.esa.int  | Nominal                      | Nominal                     |
| Processor Used:                | CryoSat Ocean Processor            | Server check: calval-pds.cryosat.esa.int   | Nominal                      | Nominal                     |
| Tocessor Used:                 | CryoSal Ocean Processor            | Product Software Check                     | Nominal                      | Nominal                     |
| Data Used:                     | Geophysical Ocean Products (GOP)   | Product Format Check                       | Nominal                      | Nominal                     |
| L1B, L2 & P2P Science Data     |                                    | Product Header Analysis                    | Nominal                      | Nominal                     |
|                                |                                    | Auxiliary Data File Usage Check            | Nominal                      | Nominal                     |
| We would                       | love to hear from you!             | Auxiliary Correction Error Check           | See Section 5.4              | See Section 6.4             |
|                                | your feedback about these daily    | Measurement Confidence Data Check          | See Section 4.5, 4.6 and 5.5 | See Section 6.5             |
|                                | do you like/ dislike? What quality | Range, SWH & Backscatter Measurement Check | See Section 5.6              | See Section 6.6             |
| information do you             | need? Send your feedback to        | Ocean Retracking Quality Check             | See Section 5.7              | See Section 6.7             |
| cs2_qc_team@telespazio.com     |                                    | QCC Error/ Warning Check                   | See Section 7.1 and 7.2      | See Section 7.1, 7.2 and 7. |

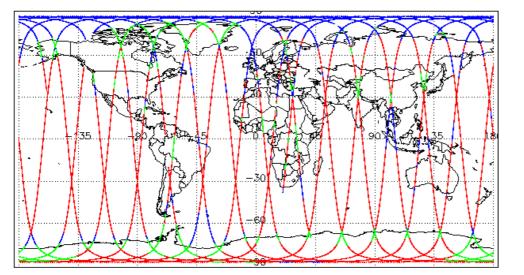
1. Overview

|                  | Mission / Instrument News |                 |  |  |
|------------------|---------------------------|-----------------|--|--|
| 08-Feb-2023 None |                           |                 |  |  |
| 09-Feb-2023      |                           | None            |  |  |
|                  | 10-Feb-2023               | 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 incor    | nsistencies and/or errors raised by the ground-segment processing chain.   |
|  |                                       | ause the l1b_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-  | determined baseline and also to       | check the validity of Auxiliary Data Files is correct.   |
| Number of products with errors: 0  |                                       |  |
| 4411P Auxiliany Correction Error Chook   |                                       |  |
| 4.4 L1B Auxiliary Correction Error Check   |                                       |  |
| CryoSat L1B data includes a correction error flag for each measurement record.   | The bit value of this flag indicate   | s any problems when set.   |
| Number of products with errors: 0  |                                       |  |
| 4.5 L1B Measurement Confidence Data Check  |                                       |  |
| CryoSat L1B data includes a measurement confidence flag for each measurement   | ent record. The bit value of this fla | ag indicates any problems when set.  |
| Attitude Correction Missing: This flag is currently set in error for GOPR produ  | cts 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_20230209T084632_20230209T091504_C001  | Power scaling error                   | There is an error in the scaling of the L1B waveform for one or more<br>records  |
| CS_OFFL_SIR_GOPM1B_20230209T140629_20230209T141203_C001  | Power scaling error                   | There is an error in the scaling of the L1B waveform for one or more<br>records  |
|  | I                                     | liecolus   |
| 4.6 L1B Waveform Group Data Check  |                                       |  |
| CryoSat L1B data includes a waveform data flag for each measurement record.  | The bit value of this flag indicate   | s any problems when set.   |
| Loss of Echo Flag: This flag is currently set for some products over land, but the   | his is to be expected.                |  |
| Number of products with errors: 19   |                                       |  |
| Product  | Test Failed                           | Description  |
| CS_OFFL_SIR_GOPM1B_20230209T040006_20230209T041307_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPM1B_20230209T112809_20230209T113356_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPM1B_20230209T220028_20230209T222841_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T033551_20230209T034003_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T051743_20230209T052014_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T065408_20230209T065629_C001<br>CS_OFFL_SIR_GOPN1B_20230209T113449_20230209T113647_C001   | Loss of Echo<br>Loss of Echo          | The tracking echo is missing for one or more records<br>The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T150547_20230209T150704_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T160039_20230209T160222_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T164031_20230209T164429_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T164449_20230209T164617_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T182055_20230209T182509_C001  | Loss of Echo                          | The tracking echo is missing for one or more records   |
| CS_OFFL_SIR_GOPN1B_20230209T213143_20230209T213340_C001<br>CS_OFFL_SIR_GOPR1B_20230209T052225_20230209T052511_C001   | Loss of Echo                          | The tracking echo is missing for one or more records<br>The tracking echo is missing for one or more records   |
|  | Loss of Echo                          |  |
| 5. GO  | P Level 2 Data Qua                    | lity Check   |
| 5.1 L2 Product Format Check  |                                       |  |
| Each product, retrieved and unpacked from the science server, is checked to er   | sure it consists of both an XML       | peader file ( HDR) and a NetCDE 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  | SPH in order to identify any incor    | 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   |                                       |  |
| 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  |                                       |  |
| 5.4 L2 Auxiliary Correction Error Check  |                                       |  |
|  |                                       |  |
| For all products, the auxiliary corrections within the Geophysical Group are chec  |                                       | 2/6/).<br>ected, 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   |                                       |  |
| > ECMWF Meteo Corrections: Currently the following corrections are not comp<br>Correction and the U-Wind and V-Wind components of the ECMWF model wind<br>not reported in the table below. |                                       | Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric<br>r (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   | products over sea ice, but this is    | to be expected.  |
| > Altimetric Wind Speed Error: The error value is currently set for products ov  | ver land and sea ice, but this is to  | be expected.   |
| Number of products with errors: 59   |                                       |  |
| Product  | Test Failed                           | Description  |
|  |                                       |  |

| CS_OFFL_SIR_GOPM_2_20230209T082449_20230209T082507_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
|---|---|--|
| CS_OFFL_SIR_GOPN_2_20230209T005911_20230209T010037_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T010548_20230209T010851_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide (solution<br>1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean<br>Tide for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T023933_20230209T024233_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T024451_20230209T025009_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T033551_20230209T034003_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide (solution<br>1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean<br>Tide for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T041928_20230209T042203_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T051444_20230209T051558_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1) and the Total Geocentric Ocean Tide<br>height (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T051743_20230209T052014_C001 | Mean Dynamic Topography (1), Total<br>Geocentric Ocean Tide (GOT), Total<br>Geocentric Ocean Tide (FES), Non-<br>Equilibrium Long Period Ocean Tide                         | There is an error with the Mean Dynamic Topography height (solution 1),<br>Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and<br>the Non-Equilibrium Long Period Ocean Tide for one or more records                                     |
| CS_OFFL_SIR_GOPN_2_20230209T055431_20230209T060028_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T065408_20230209T065629_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1) and the Total Geocentric Ocean Tide<br>height (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T065700_20230209T065849_C001 | Total Geocentric Ocean Tide (GOT),<br>Total Geocentric Ocean Tide (FES), Non-<br>Equilibrium Long Period Ocean Tide   | There is an error with the Total Geocentric Ocean Tide height (solution 1:<br>GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean<br>Tide height for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T073646_20230209T073837_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T083347_20230209T083825_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T091626_20230209T091803_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T105616_20230209T110003_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1) and the Total Geocentric Ocean Tide<br>height (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T113449_20230209T113647_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T123552_20230209T123908_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T124420_20230209T124543_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T132648_20230209T132735_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T142330_20230209T142437_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T150547_20230209T150704_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T164031_20230209T164429_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T164449_20230209T164617_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T173902_20230209T174517_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T182055_20230209T182509_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T191820_20230209T192142_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T195941_20230209T200331_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20230209T205924_20230209T210038_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T213143_20230209T213340_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T223829_20230209T223949_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T231624_20230209T231747_C001 | Total Geocentric Ocean Tide (GOT)   | There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  |

|   | 1  |   |
|---|--|---|
| CS_OFFL_SIR_GOPN_2_20230209T233707_20230209T233725_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_20230209T000951_20230209T001643_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T001643_20230209T001953_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T014828_20230209T015543_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T015543_20230209T015811_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T033013_20230209T033438_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T033438_20230209T033551_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T050812_20230209T051309_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T051309_20230209T051444_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T062455_20230209T063018_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_20230209T064758_20230209T065408_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T082932_20230209T083346_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T100346_20230209T101431_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T114711_20230209T115517_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T131911_20230209T132359_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_20230209T132735_20230209T133801_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T150705_20230209T151431_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T164617_20230209T165138_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T182509_20230209T182604_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T182604_20230209T183216_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T200332_20230209T200849_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T214025_20230209T214922_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_20230209T231953_20230209T232616_C001 | Mean Sea Surface (1), Mean Dynamic<br>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.

| Numb | per of | f products | s with | errors: |  |
|------|--------|------------|--------|---------|--|

| Product   | Test Failed         | Description   |
|---|---------------------|---|
| CS_OFFL_SIR_GOPM_2_20230209T084632_20230209T091504_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_20230209T140629_20230209T141203_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.

2

> 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_20230208T233210_20230209T000556_C001 |             | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|   | 0           | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |

| 02.011_31L_00014_2_R222201111031_2002201111032_0001         D002 Minuse Resp. Calls, Call Minuse Resp. Call Minuse Resp. Calls, Call Minuse Resp. Calls, Call Minuse Resp. Call Minus                                 | CS_OFFL_SIR_GOPM_2_20230209T004400_20230209T005911_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|--|---|--|---|
| Gir HE, BR GORM 2 202020970107 02220209710481 000       ext BC COO Americ Frage and Backeter Cubry Frage have been Affinish Frage on the COO Americ Frage and Backeter Cubry Frage have been Affinish Frage on the Coor America Frage and Backeter Cubry Frage have been Affinish Frage Cubry  | CS_OFFL_SIR_GOPM_2_20230209T010037_20230209T010548_C001 | 0 1  |   |
| CL, OFTL, SRL QOVM, 2. 2022000170 SRL 20200201710510. 2001       are Ebsected for Quinty, SNL 2001, 2001   | CS_OFFL_SIR_GOPM_2_20230209T011107_20230209T013403_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| Ch. (PHL J.R.).0074_2.1233233711641_0233237116451_0233     and the device the Unity Control       Ch. (PHL J.R.).0074_2.12332337116451_0233237116451_0201     Control Minuter Regs. 558, NWL and Buscharth Calling Control       Ch. (PHL J.R.).0074_2.12332337116451_0233237116451_0201     Control Minuter Regs. 558, NWL and Buscharth Calling Control       Ch. (PHL J.R.).0074_2.12332337116451_0233237116451_0201     Control Minuter Regs. 558, NWL and Buscharth Calling Control       Ch. (PHL J.R.).0074_2.12332337116451_0201     Control Minuter Regs. 558, NWL and Buscharth Calling Fegs having the Status of the  | CS_OFFL_SIR_GOPM_2_20230209T013518_20230209T014613_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CK, DAFL, SIR, GOPM, J., 20020001100001, 20020001100001, 20020001100001, 2001       minist Education Luality, CCCI.         CK, DAFL, SIR, GOPM, J., 20020001101001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 20020001100001, 200200001100001, 200200001100001, 200200001100000, 20020000000000   | CS_OFFL_SIR_GOPM_2_20230209T015811_20230209T015824_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CB_0FRL_SR_GOPU_2_00000010182_00000010182_0000010182_0000010182_000001182_000001         Inter Basecater Cullin, OCC6         Inter Basecater Cullin, OCC6           CB_0FRL_SR_GOPU_2_00000100450_00000100450_00001         DOOD Allineter Regins Databaseter Cullin, OCC6         The OCC6 Alterneter Regins Databaseter Cullin, OCC6           CB_0FRL_SR_GOPU_2_0000000100450_000000         Does Alternet Regins Databaseter Cullin, OCC6         The OCC6 Alterneter Regins, DBLA, SMI tere Regins, SMI, SMI tere Regins, DBLA, SMI tere Regins, DB  | CS_OFFL_SIR_GOPM_2_20230209T015950_20230209T020011_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_DFFL_SR_COPM_2_20220207104255_02202207104257_C001         Bescentr Cuality         strang cross record           CS_OFFL_SR_COPM_2_20220207104255_02202207104257_C001         Deen Atmeter Rang, SSH, SWH<br>and Bescentr Cuality         The Coen Atmeter Rang, SSH, SWH<br>and Bescentr Cuality         The Coen Atmeter Rang, SSH, SWH<br>and Bescentr Cuality           CS_OFFL_SR_COPM_2_20220207104255_02202207104255_02202207104255_02202207104255_02202207104255_02202007104255_0220207104555_0220207104555_0202055          CS_OFFL_SR_GOPM_2_202202007104255_022020710515220_02001         Deen Atmeter Range Cuality, Coenter Range Cuality, Coenter Range Cuality, Coenter Range Cuality, Coenter Range Cualit  | CS_OFFL_SIR_GOPM_2_20230209T021552_20230209T023817_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_00202091702515_00202091702517_0001 Minister Range and Baskasatian Coulty Naga Transient Coulty Flags have been with or one necess CS_OFFL_SIR_GOPM_2_00202091704004_00202091704004_00202091704005_002001 CS_OFFL_SIR_GOPM_2_00202091704004_00202091704000_002001 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_00200 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_00200 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_0020 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_0020 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_0001 CS_OFFL_SIR_GOPM_2_00202091704006_00202091704000_0001 CS_OFFL_SIR_GOPM_2_00202091704000_0001 CS_OFFL_SIR_GOPM_2_00202091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_00202091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001742_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001742_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001742_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001742_0001 CS_OFFL_SIR_GOPM_2_002020091704000_0001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_0002091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001742_0001 CS_OFFL_SIR_GOPM_2_002020091705034_00001 CS_OFFL_SIR_GOPM_2_002020091705034_00001 CS_OFFL_SIR_GOPM_2_002020091705034_00001 CS_OFFL_SIR | CS_OFFL_SIR_GOPM_2_20230209T024233_20230209T024451_C001 |  |   |
| CSL_DFL_SIR_COPM_2_20230200704006_20220200704007       and Backacater Quality Fage have been Affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range SNA, SWH and Backacater Quality Fage have been affiniter Range and Backacater Q   | CS_OFFL_SIR_GOPM_2_20230209T025135_20230209T032157_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_B2220209T042065_02230209T042560_001         and Backscatter Quality COCG<br>and the COCC Altimeter Range and Backscatter Quality Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2220209T042560_00230209T042560_001         Occen Attimeter Range, SAL, SVH<br>and Backscatter Quality COCG<br>Backscatter Quality COCG<br>Altimeter Range and Backscatter Quality Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2220209T044265_0001         Occen Attimeter Range, SAL, SVH<br>and Backscatter Quality, COCG<br>Altimeter Range and Backscatter Quality Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2220209T044265_0223029T044265_0001         Occen Attimeter Range, SSH, SVH<br>and Backscatter Quality, COCG<br>Altimeter Range and Backscatter Quality Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2202009T044265_0223029T044265_0223029T045749_COCI         OCCI Attimeter Range Quality, COCG<br>Backscatter Quality, COCG           CS_OFFL_SIR_GOPM_2_B2202009T054254_0223029T054749_COCI         OCCI Attimeter Range Backscatter Quality Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B220209T052745_0223029T052745_0203029T052745_0001         OCCI Attimeter Range, SSH, SVH<br>and Backscatter Quality, COCG<br>Backscatter Quality, COCG<br>Altimeter Range and Backscatter Quality, Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2202209T052511_20230290T052745_0001         OCCI Attimeter Range, SSH, SVH<br>and Backscatter Quality, Flags have been set<br>for one or noor records           CS_OFFL_SIR_GOPM_2_B2022029T052511_20230290T052545_0001         OCCI Attimeter Range, SSH, SVH<br>and Backscatter Quality, Flags hav  | CS_OFFL_SIR_GOPM_2_20230209T034044_20230209T035937_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| Co. DFIL_SIR_GOPM_2_2023029704305_20230297044525_0001     Backscatter Quality     tor one or more records     tor one or more records     Co. DFIL_SIR_GOPM_2_20230297044525_00230297044525_0001     Coent Aftimeter Range, SBHA, SWH and Backscatter Quality Flags have been at for one or more records     Co. DFIL_SIR_GOPM_2_20230297044525_20230297045749_C001     Coent Aftimeter Range, SBHA, SWH and Backscatter Quality Flags have been at for one or more records     The Occos Aftimeter Range and Backscatter Quality Flags have been at for one or more records     The OCOS Aftimeter Range and Backscatter Quality Flags have been at for one or more records     The OCOS Aftimeter Range and Backscatter Quality Flags have been at for one or more records     The OCOS Aftimeter Range and Backscatter Quality Flags have been at for one or more records     The OCOS Aftimeter Range and Backscatter Quality Flags have been at for one or more records     The OCOS Aftimeter Range and Backscatter Quality Flags have been at for one or more records     CS_OFFL_SIR_GOPM_2_202302097051568_202302097053708_C001     Coent Aftimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records     CS_OFFL_SIR_GOPM_2_202302097052511_202302097053708_C001     Coent Aftimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records     CS_OFFL_SIR_GOPM_2_202302097052511_2023020970502706_C001     Coent Aftimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records     CS_OFFL_SIR_GOPM_2_202302097052511_2023020970502706_C001     Coent Aftimeter Range Quality, OCOG     Aftimeter Range and Backscatter Quality Flags have been ast or one or more records     CS_OFFL_SIR_GOPM_2_202302097050250_C001     Coent Aftimeter Range Quality, OCOG        | CS_OFFL_SIR_GOPM_2_20230209T040006_20230209T041307_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS. OFFL_SIR_GOPM 2. 20230209T044035. 20230209T044625. 2001     and Backscatter Quality Plags have been adhesized tor oreor more records     and Backscatter Quality Plags have been adhesized tor oreor more records       CS. OFFL_SIR_GOPM 2. 20230209T044828. 20230209T045749. C001     Coean Altimeter Range and Backscatter Quality Plags have been adhesized tor one or more records     The Ocean Altimeter Range and Backscatter Quality Plags have been adhesized tor one or more records       CS. OFFL_SIR_GOPM 2. 20230209T051568. 20230209T051742. C001     COEan Altimeter Range Quality. COCG Altimeter Range and Backscatter Quality Plags have been adhesized tor Quality Plags have been ad   | CS_OFFL_SIR_GOPM_2_20230209T042536_20230209T042903_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_20230209T044828_20230209T045749_C001       and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the cone or more records         CS_OFFL_SIR_GOPM_2_20230209T051058_20230209T051742_C001       CCG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the COG Altimeter Range and Backscatter Quality Flags have been at the cone or more records         CS_OFFL_SIR_GOPM_2_20230209T06028_20230209T060384_C001       CCG Altimeter Range Quality, CCGG       The OCGG Altimeter Range and Backscatter Quality Flags have been at the cone or more records         CS_OFFL_SIR_GOPM_2_20230209T060383_20230209T060384_C001       CCGG Altimeter Range Quality, CCGG       The OCGG Altimeter Range and Backscatter Quality Flags have been at the cone or more records         CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001       CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at the cone or more records         CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001       CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at   | CS_OFFL_SIR_GOPM_2_20230209T043035_20230209T044625_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_DFFL_SIR_GOPM_2_20230291052945_20230291052225_C001         Backscatter Quality         The Ocean Altimeter Range SSHA, SWH and Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_20230291052951_20230291052951_20230291052950_2001         Cean Altimeter Range And Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been and the OCGO Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_20230291060028_202302910600324_C001         COCG Altimeter Range Quality, OCGO Backscatter Quality Flags have been set for one or more records         The OCGO Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_2023029106033_02030291060354_C001         COCG Altimeter Range Quality, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_2023029106033_02030291062455_C001         COCGA Altimeter Range Quality, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_202302091063345_02302091062455_C001         COCGA Altimeter Range Quality, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_GOPM_2_202302091063345_02302091063345_C02302091063456_C001         COCGA Altimeter Range Quality, CCCG Altimeter Range and Backscatte   | CS_OFFL_SIR_GOPM_2_20230209T044828_20230209T045749_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T052045_20230209T052255_C001       and Backscatter Quality, COCG       and the OCCG Altimeter Range and Backscatter Quality Flags have been Altimeter Range, SSHA, SWH       and the OCCG Altimeter Range   | CS_OFFL_SIR_GOPM_2_20230209T051558_20230209T051742_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_20230209T052511_20230209T053708_C001       and Backscatter Quality       and the CCCQ Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20230209T060028_20230209T0600324_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_20230209T060033_20230209T060035_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_20230209T061003_20230209T060455_C001       OCCean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T063456_C001       OCCGA 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_20230209T070326_20230209T070915_C001       OCCean Altimeter Range Quality, OCOG Backscatter Quality Flags have been altimeter Range Backscatter Quality Flags have been altimeter Range Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T070387_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T071159_20230209T073837_20230209T074915_20230209T074915_20230209T074915_20230209T074915_20230209T074915_20230209T074915_20230209T07  | CS_OFFL_SIR_GOPM_2_20230209T052045_20230209T052225_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T060333_20230209T060805_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001       OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>have been set<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T063455_C001       OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Attimeter Range and Backscatter Quality Flags have been set<br>Backscatter Quality, OCOG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality, COCG<br>Backscatter Quality, SSHA, SWH<br>and Backscatter Quality, COCG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality, COCG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, COCG<br>Attimeter Range and Backscatter Quality Flags have been<br>attimeter Range and Backscatter Quality, Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T071159_20230209T0703613_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, COCG<br>Attimeter Range and Backscatter Quality Flags have been set<br>for one or more records       The OCean Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T073837_20230209T074706_C001       Ocean Altimeter Range Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been set <b< td=""><td>CS_OFFL_SIR_GOPM_2_20230209T052511_20230209T053708_C001</td><td>and Backscatter Quality, OCOG</td><td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td></b<>  | CS_OFFL_SIR_GOPM_2_20230209T052511_20230209T053708_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T060033_20230209T060005_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T063456_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been atter and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been atter and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T071159_20230209T074706_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T074706_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GO  | CS_OFFL_SIR_GOPM_2_20230209T060028_20230209T060324_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T063345_20230209T063456_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T070915_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>   | CS_OFFL_SIR_GOPM_2_20230209T060333_20230209T060805_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_202302091063345_202302091063455_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_202302091070326_202302091070915_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T073837_20230209T074706_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCean Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  | CS_OFFL_SIR_GOPM_2_20230209T061003_20230209T062455_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Qualityand the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more recordsCS_OFFL_SIR_GOPM_2_20230209T071159_20230209T073613_C001Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>Backscatter Quality, OCOGThe Ocean Altimeter Range and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>have been set for one or more recordsCS_OFFL_SIR_GOPM_2_20230209T073837_20230209T074706_C001OCOG Altimeter Range Quality, OCOG<br>Backscatter QualityThe OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more recordsCS_OFFL_SIR_GOPM_2_20230209T074915_20230209T091504_C001Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>set for one or more recordsCS_OFFL_SIR_GOPM_2_20230209T074915_20230209T091504_C001Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOGThe Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>ha   | CS_OFFL_SIR_GOPM_2_20230209T063345_20230209T063456_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_20230209T071159_20230209T073613_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T073837_20230209T074706_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T074706_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags<br>have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T091504_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>have been  | CS_OFFL_SIR_GOPM_2_20230209T070326_20230209T070915_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T073937_20230209T074706_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T084632_20230209T091504_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Ran  | CS_OFFL_SIR_GOPM_2_20230209T071159_20230209T073613_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
| CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T084632_20230209T091504_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags  | CS_OFFL_SIR_GOPM_2_20230209T073837_20230209T074706_C001 |  |   |
| CS_OFFL_SIR_GOPM_2_20230209T084632_20230209T091504_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been   | CS_OFFL_SIR_GOPM_2_20230209T074915_20230209T081513_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |
|  | CS_OFFL_SIR_GOPM_2_20230209T084632_20230209T091504_C001 | and Backscatter Quality, OCOG  | and the OCOG Altimeter Range and Backscatter Quality Flags have been  |

| CS_OFFL_SIR_GOPM_2_20230209T100118_20230209T100346_C001         OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality         The OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records           CS_OFFL_SIR_GOPM_2_20230209T102125_20230209T105411_C001         Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality         The OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, Flags have<br>for one or more records           CS_OFFL_SIR_GOPM_2_20230209T110706_20230209T11132B_C001         Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have<br>for one or more records         The OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Backscatter Quality, OCOG<br>Backscatter Quality         The OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Backscatter Quality, OCOG         The OCean Altimeter Range, SSHA, SWH<br>and Backscatter Quality Flags have<br>for one or more records           CS_OFFL_SIR_GOPM_2_20230209T115900_20230209T123346_C001         Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have<br>for one or more records         The OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality         The OCean Altimeter Range and Backscatter Quality Flags have<br>for one or more records           CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001         Ocean Altimeter Range, SSHA, SWH<br>and   | Flags<br>e been<br>Flags<br>e been<br>een set<br>Flags |
|---|--|
| CS_OFFL_SIR_GOPM_2_20230209T102125_20230209T105411_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T110706_20230209T111328_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T111833_20230209T112239_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH       The Ocean Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T115900_20230209T1123346_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T1123908_20230209T124420_C001       Ocean Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCean Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T130641_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backsccatter Quality, OCOG       The OCean Altimete  | Flags<br>e been<br>een set<br>Flags                    |
| CS_OFFL_SIR_GOPM_2_20230209T110706_20230209T111328_C001       and Backscatter Quality, OCOG<br>Attimeter Range and Backscatter Quality       and the OCOG Attimeter Range and Backscatter Quality Flags have<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T111833_20230209T112239_C001       CCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T115900_20230209T1123346_C001       Ccean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have<br>for one or more records       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T123908_20230209T124420_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T123908_20230209T124420_C001       OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH         CS_OFFL_SIR_GOPM_2_20230209T130641_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG   | e been<br>een set<br>Flags                             |
| CS_OFFL_SIR_GOPM_2_20230209T11833_20230209T112239_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_20230209T115900_20230209T123346_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T123908_20230209T124420_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T124420_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T130841_20230209T131440_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality Flags have<br>set for one or more records   | Flags  |
| CS_OFFL_SIR_GOPM_2_20230209T115900_20230209T123346_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20230209T123908_20230209T124420_C001       OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have<br>for one or more records         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T124602_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       The OCOG Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have<br>set for one or more records         CS_OFFL_SIR_GOPM_2_20230209T130841_20230209T131440_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have<br>and the OCOG Altimeter Range and Backscatter Quality Flags have<br>set for one or more records   |  |
| CS_OFFL_SIR_GOPM_2_20230209T123908_20230209T124420_C001       Backscatter Quality       for one or more records         CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags has to for one or more records         CS_OFFL_SIR_GOPM_2_20230209T130841_20230209T131440_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags has the OCOG Altimeter Range Altimeter Range Altimeter Ran  |  |
| CS_OFFL_SIR_GOPM_2_20230209T124602_20230209T130544_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags has been for one or more records         CS_OFFL_SIR_GOPM_2_20230209T130841_20230209T131440_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T130841_20230209T131440_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has  |  |
| primitical statige and backstatter quality per tot 016 01 11016 1600105   |  |
| CS_OFFL_SIR_GOPM_2_20230209T133801_20230209T140618_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee   |  |
| CS_OFFL_SIR_GOPM_2_20230209T140629_20230209T141203_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been for one or more records  |  |
| CS_OFFL_SIR_GOPM_2_20230209T141710_20230209T141909_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T141915_20230209T142330_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T142528_20230209T145258_C001 Ccean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T145429_20230209T150127_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been for one or more records  |  |
| CS_OFFL_SIR_GOPM_2_20230209T151517_20230209T151547_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T151922_20230209T152017_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee   |  |
| CS_OFFL_SIR_GOPM_2_20230209T152107_20230209T153010_C001 Coean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T153326_20230209T153539_C001 Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T153551_20230209T154253_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T154409_20230209T155116_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T155247_20230209T155809_C001 OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T155815_20230209T155821_C001 OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T155827_20230209T160038_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records   | en set   |
| CS_OFFL_SIR_GOPM_2_20230209T160919_20230209T161954_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee  |  |
| CS_OFFL_SIR_GOPM_2_20230209T162322_20230209T163214_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has the ocean Altimeter Range and Backscatter Quality flags has the |  |

| CS_OFFL_SIR_GOPM_2_20230209T163341_20230209T163543_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|---|--|---|
| CS_OFFL_SIR_GOPM_2_20230209T163728_20230209T164018_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T170240_20230209T171245_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T171448_20230209T171728_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T172321_20230209T173017_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T173214_20230209T173709_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T174517_20230209T174916_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T180313_20230209T181225_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T185332_20230209T190931_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T191154_20230209T191638_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T192222_20230209T194951_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T202253_20230209T204918_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T205142_20230209T205539_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T210145_20230209T212923_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T215805_20230209T220022_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T220028_20230209T222841_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T223009_20230209T223453_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T223458_20230209T223829_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPM_2_20230209T224106_20230209T231623_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPM_2_20230209T233841_20230209T233906_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T000635_20230209T000950_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T114155_20230209T114317_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T115517_20230209T115640_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
| CS_OFFL_SIR_GOPN_2_20230209T150547_20230209T150704_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T200849_20230209T200914_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T213143_20230209T213340_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records   |
|   |  |   |

Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality 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.

| Product   | Test Failed   | Description   |
|---|---|---|
| CS_OFFL_SIR_GOPN_2_20230209T000635_20230209T000950_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have beer<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T002040_20230209T002130_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one of more records  |
| CS_OFFL_SIR_GOPN_2_20230209T002659_20230209T002710_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T003618_20230209T003802_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T005911_20230209T010037_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T021507_20230209T021552_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T024451_20230209T025009_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have beer<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T032918_20230209T033013_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have beer<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T033551_20230209T034003_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T041928_20230209T042203_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have beer<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T042400_20230209T042536_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T045750_20230209T050125_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one on more records  |
| CS_OFFL_SIR_GOPN_2_20230209T051743_20230209T052014_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| SS_OFFL_SIR_GOPN_2_20230209T053708_20230209T054108_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one more records   |
| CS_OFFL_SIR_GOPN_2_20230209T060805_20230209T060949_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T065700_20230209T065849_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| S_OFFL_SIR_GOPN_2_20230209T070203_20230209T070326_C001  | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T081513_20230209T081853_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one more records   |
| CS_OFFL_SIR_GOPN_2_20230209T083347_20230209T083825_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| S_OFFL_SIR_GOPN_2_20230209T092507_20230209T092757_C001  | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one of more records  |
| S_OFFL_SIR_GOPN_2_20230209T105616_20230209T110003_C001  | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPN_2_20230209T110548_20230209T110702_C001 | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |

| Dec. PTL_SHIL_COM_CLASSISTIC TORUS_CLASSIST         DOOD December 2011         Percent State           CIR_CERT_SHIL_COM_CLASSISTIC TORUS_CLASSIST         COOD December 2011         COOD December 2011         Coop December 2  |   |   |   |
|---|---|---|---|
| Control         Description         Description         Description         Description         Description           Control         And Andreas Response Respon   | CS_OFFL_SIR_GOPN_2_20230209T112239_20230209T112614_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS 0FFL SR 00PK 2 802289711448 202289711448 202289711487_0001       PM Machael Cally PMR, Och Cally P  | CS_OFFL_SIR_GOPN_2_20230209T112630_20230209T112809_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| Control Binl Control 2 (2020)2011 101103 (2020)2011 101101 (2001)     COCO Altister Range Cuality Files, The Coco Altister Range Cuality Files, The Coco Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)2011 101103 (2020)2011 10110 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)2011 10120 (2020)2011 10110 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)2011 10120 (2020)2011 10120 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)2011 10120 (2020)2011 10120 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10200 (2020)2011 10214 (2001)     COCO Altister Range Cuality Files, There exceeds       Cd, CFRL_SIR_GOPN_2_2020)20011 10201 (2000)     COCO Altister Range Cuality Files, There exceeds       Cdd  | CS_OFFL_SIR_GOPN_2_20230209T113449_20230209T113647_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| De Diff. Sin Cohn 2 decaded 10001         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 10001         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514108         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514108         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514108         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514108         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514108         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 5141000         DOCK Rockstein Cality         men monts           CB OFFL SIR Cohn 2 decaded 514100000000000000000000000000000000000  | CS_OFFL_SIR_GOPN_2_20230209T114155_20230209T114317_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| Count _ Shught _ Leasan Allower Hang, Count         Count & Shught _ Leasan Allower Range, Shught _ Mark and Backacater Casily _ Hang         Prove modes           Cis_OFR_SH_GOPL_2_02220209114230_02220209114231_COUNT         Count Allower Range, Shught _ Mark and Backacater Casily _ Hang         The Count Allower Range, Shught _ Mark and Backacater Casily _ Hang           Cis_OFR_SH_GOPL_2_0220209114230_0220209114231_COUNT         COUCS Allower Range Casily _ Hang         The COUCS Range and Backacater Casily _ Hang           Cis_OFR_SH_GOPL_2_02202091112014002200111120140021         COUCS Allower Range Casily _ Hang         The COUCS Range and Backacater Casily _ Hang           Cis_OFR_SH_GOPL_2_02202091112014002200111120140021         COUCS Allower Range Casily _ Hang         The COUCS Range and Backacater Casily _ Hang           Cis_OFR_SH_GOPL_2_02202091112014002200101120140022001011120140022001011120140022001011120140022001011201400220010112014002200101120140022001011120140022001011201400220010112014002200101120140022001012014002200101201400220010112014002200101120140022001011201400220010112014002200101120140022001012014002200101120140022001011201400220014001140000000000   | CS_OFFL_SIR_GOPN_2_20230209T130544_20230209T130841_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFR_SIR_GOPN_2_202302007114303_20230200714439; 2001  Per Babacatter Chailly PERM in the best additional and response been and for one conditional and response been and for one conditionant and r | CS_OFFL_SIR_GOPN_2_20230209T141308_20230209T141710_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| Concern Algorithy Service Concernence and Con | CS_OFFL_SIR_GOPN_2_20230209T142330_20230209T142437_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_COPN_2_20230209T173000_2023029T173214_C001         COCG Baskscatter Cuality FLM, COCG<br>Baskscatter Cuality FLM, COCG<br>PLLM         The Corean Alternet Range, SSHA, SWH and Backscatter Cuality Flggs<br>and the COCG Alternet Range on Backscatter Cuality Flggs have been<br>at to core a more records           CS_OFFL_SIR_COPN_2_20230209T173000_20230209T173214_C001         Cocan Alternet Range, SSHA, SWH and Backscatter Cuality Flggs have been<br>at to core a more records           CS_OFFL_SIR_COPN_2_20230209T173000_20230209T178217_C001         Cocan Alternet Range, SSHA, SWH and Backscatter Cuality Flggs have been<br>at to core a more records           CS_OFFL_SIR_COPN_2_20230209T178205_0232029T182590_C001         COCGA Alternet Flange Cuality FLM.<br>COCGB Backscatter Cuality         The COCGI Alternet Flange and Backscatter Cuality Flags have been set for one core<br>more records           CS_OFFL_SIR_GOPN_2_20230209T196732_20230209T196565_C001         COCGA Alternet Flange Cuality FLM.<br>COCGB Backscatter Cuality         The COCGI Alternet Flange Cuality FLM.<br>The COCGI Alternet Flange Cuality FLM.<br>COCGB Backscatter Cuality         The COCGI Alternet Flange Cuality FLM.<br>The COCGI Alternet Flange Cuality FLM.<br>COCGB Backscatter Cuality         The COCGI Alternet Flange SHA, SWH and Backscatter Cuality Flags have been set for one croore records         The COCGI Alternet Flange SHA, SWH and Backscatter   | CS_OFFL_SIR_GOPN_2_20230209T164031_20230209T164429_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| GS_OFFL_SIR_GOPN_2_202302091173214_C001       Amount of Backstatter Cuality Flags North Statustater Cuality Flags North North Statustater Cuality Flags North Statustater Cuality Flag  | CS_OFFL_SIR_GOPN_2_20230209T165914_20230209T170240_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| GS_OFFL_SIR_GOPN_2_202302097173902_202302097174517_C001         and Backscatter Quality FLM, COCG<br>Althemetr Range and Backscatter Quality FLM,<br>CS_OFFL_SIR_GOPN_2_202302097182055_202302097182565_0001         COCG Althemetr Range Quality PLFM,<br>COCGG Backscatter Quality         The OCOG Range and Backscatter Quality FLags have been set for one or<br>more records           CS_OFFL_SIR_GOPN_2_202302097182055_202302097195782_202302097195782_202302097195782_202302097195782_202302097195782_202302097195782_202302097195782_202302097195782_202302097195782_202302097195855_C001         COCGG Althemeter Range Quality PLFM,<br>CCCGG Backscatter Quality         The OCOG Range and Backscatter Quality FLags have been set for one or<br>more records           CS_OFFL_SIR_GOPN_2_202302097195782_202302097195782_202302097105782_00231_C001         COCGG Althemeter Range Quality PLFM,<br>CCCGG Backscatter Quality         The OCOG Range and Backscatter Quality FLags have been set for one or<br>more records           CS_OFFL_SIR_GOPN_2_202302097126572_00201         COCGG Althemeter Range Quality PLFM,<br>Ind Backscatter Quality FLM,<br>Marketer Konga and   | CS_OFFL_SIR_GOPN_2_20230209T173030_20230209T173214_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPN_2_20230209T195032_20230209T195655_C001         OCOG Backscatter Quality         Immore records           CS_OFFL_SIR_GOPN_2_20230209T195032_20230209T195655_C001         OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one of<br>more records           CS_OFFL_SIR_GOPN_2_20230209T105041_20230209T20031_C001         OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one of<br>more records           CS_OFFL_SIR_GOPN_2_20230209T201647_20230209T202015_C001         OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one of<br>more records           CS_OFFL_SIR_GOPN_2_20230209T205924_20230209T205924_20230209T210038_C001         Ocog Altimeter Range Quality PLRM,<br>OCOG Altimeter Range, SSHA, SWH<br>and backscatter Quality         The OCOG Alimeter Range, SSHA, SWH<br>and backscatter Quality Flags<br>set for one or more records           CS_OFFL_SIR_GOPR_2_20230209T005453_20230209T00555_C001         OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM,<br>OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or<br>more records   | CS_OFFL_SIR_GOPN_2_20230209T173902_20230209T174517_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| DS_OPEL_SIR_GOPN_2_20230209T195941_20230209T203331_C001         OCOG Backscatter Quality         more records           CS_OFFL_SIR_GOPN_2_20230209T195941_20230209T203331_C001         OCOG Attimeter Range Quality PLRM,<br>OCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one of<br>more records           CS_OFFL_SIR_GOPN_2_20230209T201947_20230209T202015_C001         OCCOG Attimeter Range Quality PLRM,<br>OCOG Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Plags<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Plags<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Plags<br>and Backscatter Quality Plags have been<br>set for one or more records           CS_OFFL_SIR_GOPR_2_20230209T002556_C001         OCCG Atimeter Range SNA, SWH<br>and Backscatter Quality Plags<br>and Backscatter Quality Plags<br>and Backscatter Quality Plags have been<br>set for one or more records         The Occoa Atimeter Range SNA, SWH and Backscatter Quality Plags<br>and Backscatter Quality Plags have been set for one or<br>more records           CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014553_0.001         OCCG Atimeter Rang   | CS_OFFL_SIR_GOPN_2_20230209T182055_20230209T182509_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| OS_OFFL_SIR_GOPN_2_20230209T201847_20230209T202015_C001         OCCG Backscatter Quality         more records           CS_OFFL_SIR_GOPN_2_20230209T201847_20230209T202015_C001         OCCG Attimeter Range Quality PLRM,<br>OCCG Attimeter Range And Backscatter Quality         The OCCG Attimeter Range, SSHA, SWH<br>and Backscatter Quality           CS_OFFL_SIR_GOPN_2_20230209T205924_20230209T210038_C001         OCCG Attimeter Range And Backscatter Quality         The OCCG Attimeter Range and Backscatter Quality           CS_OFFL_SIR_GOPN_2_20230209T235525_C001         OCCG Attimeter Range Quality PLRM,<br>OCCG Attimeter Range And Backscatter Quality         The OCCG Range and Backscatter Quality Flags have been set for one of<br>more records           CS_OFFL_SIR_GOPN_2_20230209T01643_20230209T001953_C001         Ocean Attimeter Range, SSHA, SWH<br>and Backscatter Quality         The OCCG Attimeter Range, SSHA  | CS_OFFL_SIR_GOPN_2_20230209T195732_20230209T195855_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPR_2_20230209T025924_20230209T205924_20230209T210038_C001       CCCG Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range 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_20230209T235403_20230209T235525_C001       OCOG Backscatter Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001       Ccean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T002153_20230209T002526_C001       Ccean Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014710_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014710_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T015543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags h   | CS_OFFL_SIR_GOPN_2_20230209T195941_20230209T200331_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPN_2_20230209T205924_20230209T21038_C001       and Backscatter Quality PLEM, COCG<br>Altimeter Range and Backscatter Quality PLBM, COCG<br>Altimeter Range and Backscatter Quality PLBM,<br>CS_OFFL_SIR_GOPN_2_20230209T235403_20230209T235525_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality PLRM,<br>COCG Backscatter Quality PLBM, COCG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001       Cocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, COCG<br>Altimeter Range and Backscatter Quality PLBM, COCG<br>Altimeter Range Quality PLRM, COCG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLBM, COCG<br>Altimeter Range, QSHA, SWH and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T014828_20230209T015543_C001       COCG Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLBM, COCG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or<br>more records       The OCOG Range and Backscatter                             | CS_OFFL_SIR_GOPN_2_20230209T201847_20230209T202015_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPR_2_20230209T01643_20230209T01953_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001       Decen Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range and Backscatter Quality FLRM, COCG Altimeter Range and Backscatter Quality FLRM, COCG Altimeter Range and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Backscatter Quality COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Qual  | CS_OFFL_SIR_GOPN_2_20230209T205924_20230209T210038_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001       and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T002153_20230209T002526_C001       Cean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality PLRM, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014710_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality PLRM, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or<br>more records         Cs_OFFL_SIR_GOPR_2_20230209T032817_20230209T032553_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quali             | CS_OFFL_SIR_GOPN_2_20230209T235403_20230209T235525_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPR_2_20230209T002153_20230209T002526_C001       and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality<br>PLRM       ind Bockscatter Quality<br>PLRM       and Backscatter Quality<br>and the OCOG Attimeter Range and Backscatter Quality<br>PLRM       ind Bockscatter Quality<br>and the OCGG Attimeter Range and Backscatter Quality<br>PLRM       ind Bockscatter Quality<br>and the OCGG Attimeter Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014710_C001       OCOG Attimeter Range Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T014828_20230209T015543_C001       OCOG Attimeter Range Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T023817_20230209T023933_C001       OCOG Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM,<br>OCOG Backscatter Quali   | CS_OFFL_SIR_GOPR_2_20230209T001643_20230209T001953_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_20230209T014854_20230209T014710_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_20230209T014828_20230209T015543_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T023817_20230209T023933_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001       OCOG Altimeter Range, Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001       OCOG Altimeter Range, Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T033013_20230209T033438_C001       OCean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality Flags have been set for one or<br>more records  | CS_OFFL_SIR_GOPR_2_20230209T002153_20230209T002526_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_202302091014828_202302091015543_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_202302091023817_202302091023933_C001       OCOG Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality       The Ocean Attimeter Range, SSHA, SWH<br>and the OCOG Attimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_202302091032157_202302091032553_C001       OCOG Attimeter Range Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_202302091032157_202302091032553_C001       OCOG Attimeter Range, SSHA, SWH,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_202302091033013_202302091033438_C001       OCean Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have been set for one or<br>more records  | CS_OFFL_SIR_GOPR_2_20230209T014654_20230209T014710_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPR_2_20230209T023817_20230209T023933_C001       and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality PLRM       The OCean Attimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Attimeter Range and Backscatter Quality Flags<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001       OCCOG Altimeter Range, SSHA, SWH<br>OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records         CS_OFFL_SIR_GOPR_2_20230209T033013_20230209T033438_C001       Ocean Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have been set for one or<br>more records   | CS_OFFL_SIR_GOPR_2_20230209T014828_20230209T015543_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
| CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_20230209T033013_20230209T033438_C001       Ocean Altimeter Range, SSHA, SWH       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_20230209T023817_20230209T023933_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_20230209T033013_20230209T033438_C001<br>Altimeter Range and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality Plags<br>and backscatter Quality Plags<br>Altimeter Range and Backscatter Quality Plags  | CS_OFFL_SIR_GOPR_2_20230209T032157_20230209T032553_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records |
|   | CS_OFFL_SIR_GOPR_2_20230209T033013_20230209T033438_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_20230209T034003_20230209T034044_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  | CS_OFFL_SIR_GOPR_2_20230209T034003_20230209T034044_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |
| CS_OFFL_SIR_GOPR_2_20230209T041307_20230209T041928_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality  | CS_OFFL_SIR_GOPR_2_20230209T041307_20230209T041928_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | and the OCOG Altimeter Range and Backscatter Quality Flags have been                  |

| Control Simil Control 2 add/20201109805 Coll         Coll Coll Backbaster Galary         International           Cirg, Simil, Son Pill, 2 add/20201109805 South 2 add/20201109818 (Son Pill)         Coll Coll Backbaster Galary         The Coll Bac   |   |   |   |
|--|---|---|---|
| CS OFFL SIR GOPR 2 00202031106812 2020000103180 CO1<br>de laboration Cuality FLAQ COCA<br>information Cuality FLAQ CUALITY FLAQ<br>COCA Cullification Cuality FLAQ CUALITY FLAQ<br>COCA Cullification Cuality FLAQ CUALITY FLAQ<br>COCA Cullification Cuality FLAQ CUALITY FLAQ<br>information Cuality FLAQ CUALITY FLAQ<br>CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ<br>CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ<br>CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ<br>CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ CUALITY FLAQ CUAL | CS_OFFL_SIR_GOPR_2_20230209T044625_20230209T044827_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFTL_SIN_COPR_2_20202007105140_20202007105144_C001         and Basksceller Gualty FLRA_COOL<br>ADD         The Calcol Address and Calcol Addres   | CS_OFFL_SIR_GOPR_2_20230209T050812_20230209T051309_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| COOG Backscatter Guary Coog Graduater Guary Coog G  | CS_OFFL_SIR_GOPR_2_20230209T051309_20230209T051444_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| Open Lengt, SMP, CMP L, 2020000106/78_2020200106500_001         OCCO Bakestant Culty         more records           Dist, Comp, SM, SWH and Bakestatter Culty Fig.         To Communication Culty Fig.         To Communication Culty Fig.           DS_OFFL_SIR_GOPR_2_2020000106578_2020200106579_0001         Communication Culty Fig.         To Communication Culty Fig.           OS_OFFL_SIR_GOPR_2_202000106529_0120200106579_0001         COMMUNICATION CULTURE Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_202000106529_0120200106529_0001         COMMUNICATION CULTURE Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_202000106529_0120200106529_0001         COCO Alimeter Fig.         Status Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_202000106529_0120200106529_0001         COCO Alimeter Fig.         Status Fig.         Status Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_202000106529_0120200106529_0001         COCO Alimeter Fig.         Status Fig.         Status Fig.         Status Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_2020000106529_012001         COCO Alimeter Fig.         Status Fig.         Status Fig.         Status Fig.         Status Fig.           OS_OFFL_SIR_GOPR_2_2020000106559_012001         COCO Alimeter Fig.         Status Fig.<   | CS_OFFL_SIR_GOPR_2_20230209T052225_20230209T052511_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFFL_SIR_GOPR_2_20230209T16558_2023029T16558_2023029T16557_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16516_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T16558_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T165164_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T165164_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T165164_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T165151_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T165151_2023029T16517_001 DCS_OFFL_SIR_GOPR_2_2023029T11511_001 DCS_OFFL_SIR_GOPR_2_2023029T11511_001 DCS_OFFL_SIR_GOPR_2_2023029T116511_2023 DCS_OFFL_SIR_GOPR_2_2023029T116511_2001 DCS_OFFL_SIR_GOPR_2_2023029T1165151_2001 DCS_OFFL_SIR_GOPR_2_2023029T1   | CS_OFFL_SIR_GOPR_2_20230209T055019_20230209T055100_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| GS_OFFL_SIR_COPR_2_20220209T08292         30220209T076203_CO01         Inter Backscatter Cuality PLEM. OCCOR<br>Hardber Plange and Backscatter Cuality PLEM. OCCOR<br>PLIM         Inter Backscatter Cuality PLEM. OCCOR<br>Hardber Plange and Backscatter Cuality PLEM. OCCOR<br>Backscatter Cuality<br>PLEM.           CS_OFFL_SIR_GOPR_2_20220209T1109346_2022020209T1109346_2022020209T1109346_20220209T1109346_2022020   | CS_OFFL_SIR_GOPR_2_20230209T064758_20230209T065408_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| Column 2, 2003/0011/2, 2003/00110222 / 2003/00110622 / 2003/00111622 / 2003/000111622 / 2003/000111622 / 2003/000111622 / 2003/000111622 / 2003/000111622 / 2003/000111622 / 2003/00011622 / 2003/0011622 / 2003/000116  | CS_OFFL_SIR_GOPR_2_20230209T065939_20230209T070203_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| GS_OFFL_SIR_GOPR_2_20230209T091504_20230209T091506_0001       and Backscatter Quality PLM, OCOG       The USE OCOG Allineter Fange and Backscatter Quality PLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T109506_20230209T101431_C001       COGG Allineter Fange SHA, SWH and Backscatter Quality PLM, OCOG       The OCOGG Allineter Fange SHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T100346_20230209T101431_C001       COGG Allineter Fange SHA, SWH and Backscatter Quality FLM, OCOG       The OCOGG Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T101431_C001       Common Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG       The OCOGG Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T114711_20230209T115517_C001       Common Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG       The OCOGG Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T131911_C001       OCGG Allineter Fange SSHA, SWH and Backscatter Quality FLM, OCOG       The OCOGG Allineter Fange, SSHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T1312735_20230209T131911_C001       OCGG Allineter Fange, SSHA, SWH and Backscatter Quality FLM, OCOG       The OCGGA Allineter Fange, SSHA, SWH and Backscatter Quality FLM, OCOG         CS_OFFL_SIR_GOPR_2_20230209T142735_20230209T151491_C001       OCGGA Allineter Fange, SSHA, SWH and Backscatter Quality FLM, OCOGA       The OCGGA Allineter Fange and Backscatter Quality FLM, OCOGA         CS_OFFL_SIR_GOPR_2_20230209T162322_01151491_C0  | CS_OFFL_SIR_GOPR_2_20230209T082527_20230209T082750_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFFL_SIR_GOPR_2_20230209110346_202302091101431_C001         OCCG Backscatter Cuality         The Ocean Altimeter Range, SSHA, SWH and Backscatter Cuality Flag           CS_OFFL_SIR_GOPR_2_20230209110346_202302091101431_C001         OCCG Backscatter Cuality         The Ocean Altimeter Range, SSHA, SWH and Backscatter Cuality Flag           CS_OFFL_SIR_GOPR_2_202302091114711_202302091115317_C001         OCCG Backscatter Cuality, Flag         The Ocean Altimeter Range, SSHA, SWH and Backscatter Cuality Flag           CS_OFFL_SIR_GOPR_2_202302091131807_202302091131911_C001         OCCG Balmeter Range, SSHA, SWH and Backscatter Cuality Flag         The Ocean Altimeter Range, SSHA, SWH and Backscatter Cuality Flag           CS_OFFL_SIR_GOPR_2_202302091131807_202302091131911_C001         OCCG Balmeter Range, SSHA, SWH and Backscatter Cuality Flags have be set for one or more records           CS_OFFL_SIR_GOPR_2_202302091132735_202302091131911_C001         OCCG Altimeter Range, SSHA, SWH and Backscatter Cuality Flags have be set for one or more records           CS_OFFL_SIR_GOPR_2_202302091141203_202302091141308_C001         Altimeter Range, SSHA, SWH and Backscatter Cuality Flags have be set for one or more records           CS_OFFL_SIR_GOPR_2_202302091141203_202302091161431_C001         Altimeter Range, SSHA, SWH and Backscatter Cuality Flags have be set for one or more records           CS_OFFL_SIR_GOPR_2_202302091161431_C001         Altimeter Range, SSHA, SWH and Backscatter Cuality Flags have be set for one or more records           CS_OFFL_SIR_GOPR_2_20230209116214_20302091161431_C001         Altimeter Range, SSHA, SWH and Backscatter  | CS_OFFL_SIR_GOPR_2_20230209T091504_20230209T091626_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| GS_OFFL_SIR_GOPR_2_20230209T10346_20230209T10431_C001       and Backscatter Quality FLRM_CC02       Inter Counce of more records         GS_OFFL_SIR_GOPR_2_20230209T114711_20230209T115517_C001       Coean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T114711_20230209T115517_C001       COCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T131807_20230209T131911_C001       COCG Backscatter Quality PLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T132735_20230209T133801_C001       Coean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308       Coean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T1610505_20230209T161313_C001       Attimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T160540_C001       Attimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM_CC02         GS_OFFL_SIR_GOPR_2_20230209T160540_C001       Attimeter Range, SSHA, SWH and Backsca   | CS_OFFL_SIR_GOPR_2_20230209T095818_20230209T095907_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFFL_SIR_GOPR_2_20230209T114711_20230209T115517_C001       and Backscatter Quality PERM, QCG       Intel DecGen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T131807_20230209T131911_C001       OCCG Altimeter Range Quality PERM, OCG       The OCCG Range and Backscatter Quality Flags have been set for on more records         CS_OFFL_SIR_GOPR_2_20230209T132735_0230209T133801_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for on more records       The OCCG Range and Backscatter Quality Flags have been set for on more records         CS_OFFL_SIR_GOPR_2_20230209T141203_0230209T141308_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for on error records       The OCCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T141203_0230209T141308_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records       The OCCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160705_0230209T161431_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records       The OCCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for on or more records         CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for on more records         CS_OFFL_SIR_GOPR_2_20230209T166138_C001       OCCean Altimeter Rang  | CS_OFFL_SIR_GOPR_2_20230209T100346_20230209T101431_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T132735_20230209T133801_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_20230209T132735_20230209T132801_C001       Ocean Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308_C001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T151431_C001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160705_20230209T151431_C001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160705_20230209T1616540_C001       Mineter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001       Mineter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T162144_20230209T162322_C001       OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165138_C001       OCCan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165318_C001       OCCan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records   | CS_OFFL_SIR_GOPR_2_20230209T114711_20230209T115517_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T132735_20230209T133801_C001       and Backscatter Quality PLRM, COCG         Altimeter Range and Backscatter Quality PLRM, COCG       Altimeter Range and Backscatter Quality PLRM, COCG         CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308_C001       Cean Altimeter Range and Backscatter Quality PLRM, COCG         CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308_C001       Cean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_GOPR_2_20230209T150705_20230209T151431_C001       Cean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_GOPR_2_20230209T160705_20230209T151431_C001       Cean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001       Cean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001       Cean Altimeter Range and Backscatter Quality PLRM, COCG         Altimeter Range and Backscatter Quality PLRM, COCG       The Ocean Altimeter Range and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160242_20230209T162342_C001       OCGG Altimeter Range Quality PLRM, COCG         CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T16538_C001       OCGG Altimeter Range and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165318_C001       Cean Altimeter Range and Backscatter Quality PLRM, COCG         Altimeter Range and Backscatter Quality Flags have be set for one or more records       The Ocean Altimeter Range and Backscatter Quality Flags have be set  | CS_OFFL_SIR_GOPR_2_20230209T131807_20230209T131911_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308_C001       and Backscatter Quality PLRM, OCCG       The Ocean Altimeter Range and Backscatter Quality Flag and the COCG Altimeter Range and Backscatter Quality Flag         CS_OFFL_SIR_GOPR_2_20230209T150705_20230209T151431_C001       Altimeter Range and Backscatter Quality PLRM, OCCG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag         CS_OFFL_SIR_GOPR_2_20230209T150705_20230209T1507007_20230209T150705_20230209T150705_20230209T150705_20  | CS_OFFL_SIR_GOPR_2_20230209T132735_20230209T133801_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T150705_20230209T151431_C001       and Backscatter Quality PLRM, COCG<br>Attimeter Range and Backscatter Quality PLRM, OCOG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality FLRM, OCOG<br>Attimeter Range and Backscatter Quality FLRM, OCOG<br>Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160222_20230209T160540_C001       OCOG Altimeter Range Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T162144_20230209T162322_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165138_C001       Ocean Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001       Ocean Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Attimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Attimeter  | CS_OFFL_SIR_GOPR_2_20230209T141203_20230209T141308_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001       and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>ast for one or more records         CS_OFFL_SIR_GOPR_2_20230209T162144_20230209T162322_C001       OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality PLRM, OCOG<br>Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for on<br>more records         CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165138_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Attimeter Range and  | CS_OFFL_SIR_GOPR_2_20230209T150705_20230209T151431_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T162144_20230209T165138_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165138_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG  | CS_OFFL_SIR_GOPR_2_20230209T160222_20230209T160540_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165138_C001       and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range and Backscatter Quality PLRM, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>have be<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>have be<br>set for one or more records  | CS_OFFL_SIR_GOPR_2_20230209T162144_20230209T162322_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
| CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001       and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag<br>set for one or more records         CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality PLRM       The OCOG Altimeter Range and Backscatter Quality Flag<br>and the OCOG Altimeter Range and Backscatter Quality PLRM   | CS_OFFL_SIR_GOPR_2_20230209T164617_20230209T165138_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM OCOG Altimeter Range Quality PLRM The OCOG Range and Backscatter Quality Flags have been set for one   | CS_OFFL_SIR_GOPR_2_20230209T165205_20230209T165314_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS OFEL SUB CORP 3 20220200T1774016 20220200T1775129 COAL OCCOG Altimeter Range Quality PLRM, The OCCOG Range and Backscatter Quality Flags have been set for on   | CS_OFFL_SIR_GOPR_2_20230209T173017_20230209T173030_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T174916_20230209T175128_C001 OCOG Backscatter Quality more records  | CS_OFFL_SIR_GOPR_2_20230209T174916_20230209T175128_C001 |   | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |
|  | CS_OFFL_SIR_GOPR_2_20230209T181740_20230209T181954_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|  | CS_OFFL_SIR_GOPR_2_20230209T182509_20230209T182604_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|  | CS_OFFL_SIR_GOPR_2_20230209T182604_20230209T183216_C001 | and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|  | CS_OFFL_SIR_GOPR_2_20230209T184551_20230209T184607_C001 | OCOG Altimeter Range Quality PLRM,  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records   |

| CS_OFFL_SIR_GOPR_2_20230209T184610_20230209T185332_C001                       | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
|---|---|---|
| CS_OFFL_SIR_GOPR_2_20230209T194951_20230209T195122_C001                       | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or more records  |
| CS_OFFL_SIR_GOPR_2_20230209T200332_20230209T200849_C001                       | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T200915_20230209T201150_C001                       | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or more records  |
| CS_OFFL_SIR_GOPR_2_20230209T214025_20230209T214922_C001                       | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T214943_20230209T215213_C001                       | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T231953_20230209T232616_C001                       | Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality PLRM, OCOG<br>Altimeter Range and Backscatter Quality<br>PLRM | The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records |
| CS_OFFL_SIR_GOPR_2_20230209T233107_20230209T233312_C001                       | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or more records  |
| L2 Quality Flags (1 Hz & 1 Hz PLRM)   |   |   |
| Currently, there are several common flags raised in the Level 2 products, w   | which are summarised below.   |   |
| > 1 Hz and 1 Hz Ocean SSHA Quality Flags: These flags are currently set for a | products over sea ice, which is to be expected  | ed.   |
| Number of products with errors: 184   |   |   |

#### 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.

57

146

#### 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

#### 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: 0

#### 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:

### 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_220230208T232540_20230209T001519_C002 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T001519_20230209T010455_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1) | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
|   | Topography (1), Total Geocentric Ocean               | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide height<br>(solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height<br>for one or more records |

|  | Í   |  |
|--|---|--|
| CS_OFFL_SIR_GOP_220230209T015433_20230209T024409_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_2_20230209T024409_20230209T033348_C001 | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T033348_20230209T042324_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide height<br>(solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height<br>for one or more records |
| CS_OFFL_SIR_GOP_220230209T042324_20230209T051303_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T051303_20230209T060238_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide height<br>(solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height<br>for one or more records |
| CS_OFFL_SIR_GOP_220230209T060238_20230209T065217_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T065217_20230209T074153_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1), the Total Geocentric Ocean Tide height<br>(solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height<br>for one or more records |
| CS_OFFL_SIR_GOP_220230209T074153_20230209T083132_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T083132_20230209T092108_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T092108_20230209T101047_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T101047_20230209T110023_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1) and the Total Geocentric Ocean Tide<br>height (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_GOP_220230209T110023_20230209T115002_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T115002_20230209T123937_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T123937_20230209T132916_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T132916_20230209T141852_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T141852_20230209T150831_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T150831_20230209T155807_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T155807_20230209T164745_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T164745_20230209T173721_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T173721_20230209T182700_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T182700_20230209T191636_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T191636_20230209T200615_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T200615_20230209T205551_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T205551_20230209T214529_C001  | Mean Sea Surface (1), Mean Dynamic<br>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_220230209T214529_20230209T223505_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_220230209T223505_20230209T232444_C001  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography height (solution 1) and the Total Geocentric Ocean Tide<br>height (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_GOP_220230209T232444_20230210T001420_C002  | Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>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.

| Product   | Test Failed         | Description   |
|---|---------------------|---|
| CS_OFFL_SIR_GOP_220230209T083132_20230209T092108_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records |
| CS_OFFL_SIR_GOP_220230209T132916_20230209T141852_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 di      | rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.                          |
| Number of products with errors:                | 29  |
| P2P Quality Flags (20 Hz PLRM)                 |   |
| Since the P2P Quality Flags are copied di      | rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.                          |
| Number of products with errors:                | 30  |
| P2P Quality Flags (1 Hz & 1 Hz Pl              | LRM)  |
| Since the P2P Quality Flags are copied di      | rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.                          |
| Number of products with errors:                | 30  |
| 6.8 P2P Ocean Retracking Qua                   | ality Check   |
| P2P Retracking Flags (20 Hz)                   |   |
| Cryosat P2P data includes an ocean retracking  | ng 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): Th       | is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.                    |
| Number of products with errors:                | 26  |
| P2P Retracking Flags PLRM                      |   |
| CrueCat I O data includes an access vaturation | a such that for each 20 LIS DI DN measurement record. The bit value of this flar indicates any architecture when each     |

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:

# 7. GOP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

| Product type | No. Products | No. QCC Reports | No. Valid | No. Warnings | No. Errors |
|--------------|--------------|-----------------|-----------|--------------|------------|
| SIR_GOPM1B   | 217          | 217             | 2         | 215          | 0          |
| SIR_GOPR1B   | 132          | 132             | 0         | 132          | 0          |
| SIR_GOPN1B   | 103          | 103             | 3         | 100          | 0          |
| SIR_GOPM_2   | 217          | 217             | 163       | 54           | 0          |
| SIR_GOPR_2   | 132          | 132             | 48        | 83           | 1          |
| SIR_GOPN_2   | 103          | 103             | 41        | 62           | 0          |
| SIR_GOP_P2P  | 29           | 29              | 0         | 28           | 1          |

### 7.1 QCC Errors

| Number of QCC | reports with er | rors: | 2          |            |              |                |               |   |   |   |   |
|---------------|-----------------|-------|------------|------------|--------------|----------------|---------------|---|---|---|---|
|               |                 |       |            |            | Total number | of occurrences | of each error |   |   |   |   |
| Product Type  | RLOBOPNCDF      | RL    | RL         | RLOBOPNCDF | RL           | RL             | -             | - | - | - | - |
| SIR_GOPR_2    | 1               | 1     | 1          | 1          | 1            | 1              |               |   |   |   |   |
|               |                 |       |            |            |              |                |               |   |   |   |   |
| Product Type  | RLOBOPNCDF      | RL    | RLOBOPNCDF | RL         | -            | -              | -             | - | - | - | - |
| SIR_GOP_2_    | 1               | 1     | 1          | 1          |              |                |               |   |   |   |   |
|               |                 |       |            |            |              |                |               |   |   |   |   |

| Test Description Key: |                                 |  |
|-----------------------|---------------------------------|--|
| Abbreviation          | Test name                       | Details                                      |
| RLOBOPNCDF            | RangeLatitudeOrBlankOP_7NetCDF  | Latitude should be between -90E7 and 90E7    |
| RL                    | RangeLatitude_6                 | Latitude should be between -90E6 and 90E6    |
| RL                    | RangeLatitude_7                 | Latitude should be between -90E7 and 90E7    |
| RLOBOPNCDF            | RangeLongitudeOrBlankOP_7NetCDF | Longitude should be between -180E7 and 180E7 |

### 7.2 QCC Warnings

| Number of QCC repo | rts with warnings | 2202              |                           |   |                         |                  |                   |
|--------------------|-------------------|-------------------|---------------------------|---|-------------------------|------------------|-------------------|
| Product Type       | BCSHNCDF          | IOHHMOOR          | Total nun<br>MVIOEPFDNCDF | nber of occurrences of ea<br>MVIOEPNCDF | ACh warning<br>MVIONCDF | RBSZOPOEPFDNCDF  | RBSZOPOEPFDPLRMNC |
| SIR GOPM1B         | 215               | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR GOPM 2         | 0                 | 0                 | 36                        | 35                                      | 0                       | 45               | 0                 |
| SIR GOPN1B         | 100               | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR GOPN 2         | 0                 | 0                 | 10                        | 33                                      | 8                       | 31               | 30                |
| SIR GOPR1B         | 131               | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPR_2         | 0                 | 1                 | 30                        | 35                                      | 0                       | 32               | 28                |
| ,                  |                   |                   |                           |   |                         |                  |                   |
| Product Type       | RBSZOPOEPNCDF     | RNELPOTONCDF      | RPEPOPFDLRMNCDF           | RPEPOPFDPLRMSARNC                       | RPEPOPFDPLRMSINNCD      | RPEPOPFDSARNCDF  | RPEPOPFDSINNCDF   |
| SIR_GOPM1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPM_2         | 40                | 1                 | 31                        | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPN1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPN_2         | 23                | 1                 | 0                         | 0                                       | 28                      | 0                | 37                |
| SIR_GOPR1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPR_2         | 21                | 4                 | 0                         | 37                                      | 0                       | 43               | 0                 |
|                    |                   |                   | -                         |   |                         | -                |                   |
| Product Type       | RPEPOPLRMNCDF     | RPEPOPSARNCDF     | RPEPOPSINNCDF             | RSSBCONCDF                              | RSSHAOFDNCDF            | RSSHAOFDPLRMNCDF | RSSHAONCDF        |
| SIR_GOPM1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPM_2         | 25                | 0                 | 0                         | 2                                       | 23                      | 0                | 1                 |
| SIR_GOPN1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPN_2         | 0                 | 0                 | 32                        | 13                                      | 43                      | 44               | 25                |
| SIR_GOPR1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPR_2         | 0                 | 34                | 0                         | 5                                       | 58                      | 37               | 21                |
|                    |                   |                   |                           | -                                       |                         |                  |                   |
| Product Type       | RSWHOEPFDNCDF     | RSWHOEPFDPLRMNCDF | RSWHOEPNCDF               | SPHRTASCNSNCDF                          | SOOHHIFHD               | SCSTODHRNCDF     | SCSTODNCDF        |
| SIR_GOPM1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPM_2         | 32                | 0                 | 0                         | 0                                       | 0                       | 0                | 0                 |
| SIR_GOPN1B         | 0                 | 0                 | 0                         | 0                                       | 0                       | 53               | 1                 |
| SIR_GOPN_2         | 33                | 27                | 13                        | 0                                       | 0                       | 0                | 0                 |

| SIR_GOPR1B                 | 0                               | 0                  | 0               | 0                   | 0                | 132                | 7                |
|----------------------------|---------------------------------|--------------------|-----------------|---------------------|------------------|--------------------|------------------|
| SIR_GOPR_2                 | 25                              | 41                 | 4               | 1                   | 2                | 0                  | 0                |
|                            |                                 |                    |                 |                     |                  |                    |                  |
| Product Type               | IOHHMOOR                        | MVIOEPFDNCDF       | MVIOEPNCDF      | MVIONCDF            | RBSZOPOEPFDNCDF  | RBSZOPOEPFDPLRMNCD | RBSZOPOEPNCDF    |
| SIR_GOP_2_                 | 17                              | 27                 | 28              | 6                   | 29               | 17                 | 29               |
|                            |                                 |                    |                 |                     |                  |                    |                  |
|                            |                                 |                    |                 |                     |                  |                    |                  |
| Product Type               | RNELPOTONCDF                    | RPEPOPFDPLRMSINNCD | RPEPOPFDSINNCDF | RPEPOPSINNCDF       | RSSBCONCDF       | RSSHAOFDNCDF       | RSSHAOFDPLRMNCDF |
| Product Type<br>SIR_GOP_2_ | RNELPOTONCDF                    |                    |                 | RPEPOPSINNCDF<br>23 | RSSBCONCDF<br>15 | RSSHAOFDNCDF<br>29 | RSSHAOFDPLRMNCDF |
|                            | RNELPOTONCDF     5              |                    |                 |                     |                  |                    |                  |
|                            | RNELPOTONCDF<br>5<br>RSSHAONCDF | 17                 |                 | 23                  |                  |                    |                  |

| Test Description Key:   |   |   |
|-------------------------|---|---|
| Abbreviation            | Test name   | Details   |
| BCSHNCDF                | BurstCounterStep20HzNetCDF                                  | The burst counter should be one higher with regard to the previous burst counter  |
| IOHHMOOR                | IndexOf1Hzin20HzMappingOutOfRange                           | The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)  |
| MVIOEPFDNCDF            | MissingValueIntOceanExcludingPolarFD2NetCDF                 | The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees                                      |
| MVIOEPNCDF              | MissingValueIntOceanExcludingPolarNetCDF                    | The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees                                      |
| MVIONCDF                | MissingValueIntOceanNetCDF                                  | The value should not be a 'missing value' for surface type 0 only   |
| RBSZOPOEPFDNCDF         | RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF     | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees        |
| RBSZOPOEPFDPLRM<br>NCDF | RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees        |
| RBSZOPOEPNCDF           | RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF        | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees        |
| RNELPOTONCDF            | RangeNELPOceanTideOceanNetCDF                               | The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for<br>surface type = ocean             |
| RPEPOPFDLRMNCDF         | RangePeakinessExcludingPolarOPFD2LRMNetCDF                  | The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees                    |
| RPEPOPFDPLRMSAR<br>NCDF | RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF              | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
| RPEPOPFDPLRMSINN<br>CDF | RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF              | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees                   |
| RPEPOPFDSARNCDF         | RangePeakinessExcludingPolarOPFD2SARNetCDF                  | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
| RPEPOPFDSINNCDF         | RangePeakinessExcludingPolarOPFD2SINNetCDF                  | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
| RPEPOPLRMNCDF           | RangePeakinessExcludingPolarOPLRMNetCDF                     | The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                       |
| RPEPOPSARNCDF           | RangePeakinessExcludingPolarOPSARNetCDF                     | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
| RPEPOPSINNCDF           | RangePeakinessExcludingPolarOPSINNetCDF                     | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
| RSSBCONCDF              | RangeSeaStateBiasCorrectionOceanNetCDF                      | The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean  |
| RSSHAOFDNCDF            | RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF                  | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSSHAOFDPLRMNCD<br>F    | RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF              | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSSHAONCDF              | RangeSeaSurfaceHeightAnomalyOceanNetCDF                     | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSWHOEPFDNCDF           | RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF      | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
| RSWHOEPFDPLRMNC<br>DF   | RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF  | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
| RSWHOEPNCDF             | RangeSignificantWaveHeightOceanExcludingPolarNetCDF         | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
| SPHRTASCNSNCDF          | SPH_Rel_Time_ASC_Node_Start_v2_NetCDF                       | Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)   |
| SOOHHIFHD               | SameOrOneHigher1HzIndexFor20HzData                          | The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample  |
| SCSTODHRNCDF            | SequenceCounterStepTODHRNetCDF                              | The sequence counter should be modulo 4 higher with regard to the previous sequence counter   |
|                         |   |   |

# 7.3 Missing QCC Reports

÷

 Pumber of products with missing QCC reports:
 1

 L1B and L2 Product name
 P2P Product name

 n/a
 CS\_OFFL\_SIR\_GOP\_2\_20230209T232444\_20230210T001420\_C002