

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

02/09/2021

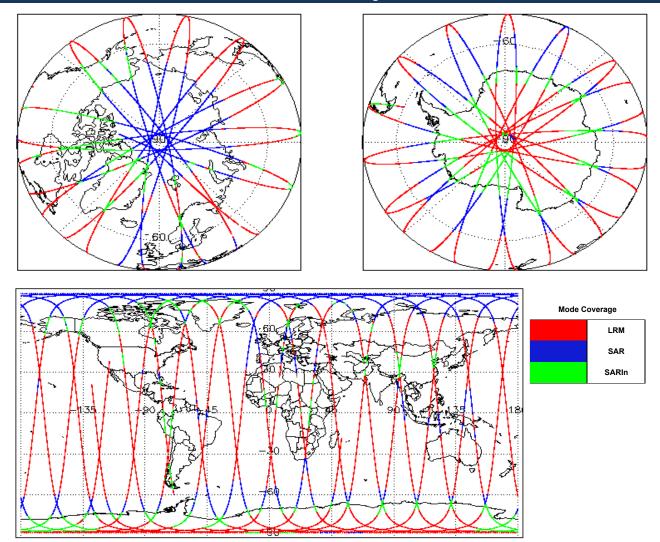
| Report Production: | 01-Oct-2021                      | Check                                      | L1 & L2                      | P2P                     |
|--------------------|----------------------------------|--|------------------------------|-------------------------|
| Report Production. | 01-001-2021                      | Server check: science-pds.cryosat.esa.int  | Nominal                      | Nominal                 |
| Processor Used:    | CryoSat Ocean Processor          | Server check: calval-pds.cryosat.esa.int   | Nominal                      | Nominal                 |
| Processor used.    | CryoSat Ocean Processor          | Product Software Check                     | Nominal                      | Nominal                 |
| Data Used:         | Geophysical Ocean Products (GOP) | Product Format Check                       | Nominal                      | Nominal                 |
| Dala Useu.         | L1B, L2 & P2P Science Data       | Product Header Analysis                    | Nominal                      | Nominal                 |
|                    |                                  | Auxiliary Data File Usage Check            | Nominal                      | Nominal                 |
|                    |                                  | Auxiliary Correction Error Check           | See Section 5.4              | See Section 6.4         |
|                    |                                  | Measurement Confidence Data Check          | See Section 4.5, 4.6 and 5.5 | See Section 6.5         |
|                    |                                  | Range, SWH & Backscatter Measurement Check | See Section 5.6              | See Section 6.6         |
|                    |                                  | Ocean Retracking Quality Check             | See Section 5.7              | See Section 6.7         |
|                    |                                  | QCC Error/ Warning Check                   | See Section 7.1 and 7.2      | See Section 7.1 and 7.2 |

1. Overview

# Mission / Instrument News 01-Sep-2021 None 02-Sep-2021 None

03-Sep-2021 Nothing planned

2. Global Coverage



# 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

# 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 binary product file (.DBL). 0

Number of products with errors:

| or all products, a series of pre-defined ch   | ecks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.                                  |
|---|--|
| <b>1B Processing Quality HR:</b> The l1b_pro<br>DSARIn chains. A modification is required | c_flag_hr flag is currently set all L1B GOPR and GOPN products because the I1b_processing_quality_hr field is not correctly configured in the OSAR a<br>in the next release. |
| lumber of products with errors:   | 0  |
| 4.3 L1B Auxilary Data File Us   | age Check  |
| ach 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.   |
| lumber of products with errors:   | 0  |
| 4.4 L1B Auxiliary Correction  | Error Check  |
| CryoSat L1B data includes a correction err  | or flag for each measurement record. The bit value of this flag indicates any problems when set.   |
| lumber of products with errors:   | 0  |
| 4.5 L1B Measurement Confic  | ence Data Check  |
|   |  |

Attitude Correction Missing: This flag is currently set in error for GOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors:

| Product   | Test Failed         | Description   |
|---|---------------------|---|
| CS_OFFL_SIR_GOPM1B_20210902T053958_20210902T054227_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_20210902T090440_20210902T090816_C001 | Power scaling error | There is an error in the scaling of the L1B waveform for one or more<br>records |

#### 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 indicates any problems when set.

Loss of Echo Flag: This flag is currently set for some products over land, but this is to be expected.

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#### Number of products with errors:

| Product   | Test Failed  | Description  |
|---|--------------|--|
| CS_OFFL_SIR_GOPM1B_20210902T075316_20210902T081023_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPM1B_20210902T123424_20210902T124120_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPM1B_20210902T174716_20210902T180200_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T002305_20210902T002445_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T092720_20210902T093308_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T110043_20210902T110111_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T124938_20210902T125325_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T141625_20210902T141712_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T155851_20210902T160111_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPN1B_20210902T191714_20210902T191930_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20210902T010423_20210902T011153_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20210902T012103_20210902T012254_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20210902T024219_20210902T024955_C001 | Loss of Echo | The tracking echo is missing for one or more records |
| CS_OFFL_SIR_GOPR1B_20210902T174015_20210902T174715_C001 | Loss of Echo | The tracking echo is missing for one or more records |

## 5. GOP Level 2 Data Quality Check

#### 5.1 L2 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 binary product file (.DBL).

Number of products with errors:

#### 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 inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors:

#### 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:

## 5.4 L2 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 which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which 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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Number of products with errors:

Test Failed

| CS_OFFL_SIR_GOPM_2_20210902T011233_20210902T011725_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
|---|---|--|
| CS_OFFL_SIR_GOPM_2_20210902T012549_20210902T012723_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_GOPM_2_20210902T072135_20210902T073058_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T002305_20210902T002445_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T015312_20210902T015432_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T020002_20210902T020318_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_20210902T025118_20210902T025208_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T025430_20210902T025604_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T033238_20210902T033352_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T033859_20210902T034215_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 Perioc<br>Ocean Tide | There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1), Total Geocentric Ocean Tide (GOT),<br>Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period<br>Ocean Tide for one or more records |
| CS_OFFL_SIR_GOPN_2_20210902T051334_20210902T051610_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_20210902T051804_20210902T052347_C001 | GPD Wet Tropospheric Correction,<br>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 the Mean Dynamic Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T060854_20210902T061024_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_20210902T065202_20210902T065510_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_20210902T074806_20210902T074912_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_20210902T083106_20210902T083310_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_20210902T092720_20210902T093308_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) and 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_20210902T115000_20210902T115120_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T132949_20210902T133316_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_20210902T142834_20210902T143102_C001 | Mean Dynamic Topography (1), 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 (FES) and the Non-Equilibrium Long Period<br>Ocean Tide for one or more records   |
| CS_OFFL_SIR_GOPN_2_20210902T150856_20210902T151217_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_20210902T151734_20210902T151857_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_20210902T155851_20210902T160111_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_20210902T165627_20210902T165741_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_20210902T173910_20210902T174015_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_20210902T183332_20210902T183531_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_20210902T191714_20210902T191930_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_20210902T205253_20210902T205806_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_20210902T215244_20210902T215505_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPN_2_20210902T223217_20210902T223629_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_GOPR_2_20210902T010423_20210902T011153_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_20210902T012103_20210902T012254_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_GOPR_2_20210902T024219_20210902T024955_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_20210902T024955_20210902T025117_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_20210902T042139_20210902T042854_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_20210902T042854_20210902T043158_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_20210902T060135_20210902T060746_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_20210902T060746_20210902T060854_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_20210902T065005_20210902T065202_C001 | Mean Sea Surface (1)                                 | There is an error with the MSS height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOPR_2_20210902T074115_20210902T074402_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_20210902T074402_20210902T074805_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_20210902T092153_20210902T092720_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_20210902T110237_20210902T110737_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_20210902T124121_20210902T124938_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_20210902T142030_20210902T142833_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_20210902T160112_20210902T160859_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_20210902T174015_20210902T174715_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_20210902T185500_20210902T185714_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_20210902T191931_20210902T192353_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_20210902T192353_20210902T192636_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_20210902T205806_20210902T210436_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_20210902T223630_20210902T224131_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_20210902T224131_20210902T224541_C001 | Mean Dynamic Topography (1)                          | There is an error with the Mean Dynamic Topography (solution 1) for one or more records   |
|   |  |   |

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# 5.5 L2 Measurement Confidence Data Check

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

| Number of products with errors: 2                       |                     |   |
|---|---------------------|---|
| Product   | Test Failed         | Description   |
| CS_OFFL_SIR_GOPM_2_20210902T053958_20210902T054227_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_20210902T090440_20210902T090816_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 (20Hz)

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

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

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

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

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#### Number of products with errors:

| Product   | Test Failed  | Description  |
|---|--|--|
| CS_OFFL_SIR_GOPM_2_20210901T234646_20210902T001113_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_20210902T001433_20210902T001929_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_20210902T001937_20210902T002305_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_20210902T002733_20210902T010115_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_20210902T011233_20210902T011725_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. |

records

| Marcel Register and Section Could.         Marcel Register and Section Could.           C2, 011, DR, COVM_2, DR21002100100, DR21002110011         CCC0 Alternor Register (Marcel Could).         Development Register (Marcel Could).           C2, 011, DR, COVM_2, DR21002110010, DR2100210011         Coco Alternor Register (Marcel Could).         Development Register (Marcel Could).         Development Register (Marcel Could).           C2, 011, DR, COVM_2, DR21002110010, DR2100210001         Coco Alternor Register (Marcel Could).         Development Register (Marcel Could).         Development Register (Marcel Could).         Development Register (Marcel Could).           C2, 011, DR, COVM_2, DR21002110010, DR2100210000, DR2100210000, DR2100210000, DR2100210000, DR2100210000, DR2100210000, DR2100210000, DR210000, DR2100210000, DR210000, DR210000, DR21000, DR   |   |                               |  |
|---|---|-------------------------------|--|
| Cite Cite Line Unit 2         All Control Control         Rescarted Cuty         International           Cite Cite Line Unit Cite Control         Rescarted Cuty  | CS_OFFL_SIR_GOPM_2_20210902T014942_20210902T014952_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CH, DHL, SHC, GOM, 2. 2011082/102141_0211982/102119       are blackstore Gainy COD       and the OCD Animeter Range and Backstore Cash Page have blackstore Cash Page have blacks   | CS_OFFL_SIR_GOPM_2_20210902T015432_20210902T020001_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| <ul> <li>C2: 0FL SR. GOM 2. 3021082102082 3021082102480.0001</li> <li>D2: 0FL SR. GOM 2. 3021082102088 3021082100200</li> <li>D2: 0FL SR. GOM 2. 3021082102082 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 3021082102082 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 302108210282 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 302108210282 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 3021082102800002 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 3021082102800002 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 30210821028000002 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 30210821028000002 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 30210821028000002 3021082102880.0001</li> <li>D2: 0FL SR. GOM 2. 30210821028000000 3021080000000000000000000000000000000000</li></ul>  | CS_OFFL_SIR_GOPM_2_20210902T020716_20210902T024219_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| Call DPTL_SRL_GOVM_2_202108027031282_20210927002830_COVI         Description of the construction of the constructi  | CS_OFFL_SIR_GOPM_2_20210902T025208_20210902T025430_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CE_OFTL_SR_00FW_2_32210932703129_2021092703289_0001  IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII  | CS_OFFL_SIR_GOPM_2_20210902T030756_20210902T031000_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| CS_DFH_SH_COPM_2_ADJ/00100000_000000         Bedesate-Outly         For an or more records.           CS_DFH_SH_COPM_2_D00100000_0000000_0000000000000000000  | CS_OFFL_SIR_GOPM_2_20210902T031219_20210902T032838_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_DPFL_SR_0CPAL_2321802T03195_20210002T03195_2021002T03195_2021002T03195_2021002T03195_202   | CS_OFFL_SIR_GOPM_2_20210902T033352_20210902T033859_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| CS_DFTL_SIR_GOPM_2.2021092704358_202109027043324_0001       and Backsatte Outlin, OCG       Attempt And Dacksatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.20210927044358_2021092703055_C001       and Backsatte Outlin, OCG       and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.20210927044358_2021092703055_C001       and Backsatte Outlin, OCG       and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705459_2021092703055_C001       and Backsatte Outlin, OCG       and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_2021092705595_C001       and Backsatte Outlin, OCG       Attempt Amerga and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_2021092705595_C001       and Backsatte Outlin, OCG       Attempt Amerga and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_201092705595_C001       and Backsatte Outlin, OCG       and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_201092705595_C001       and Backsatte Outlin, OCG       and Backsatte Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_2010907109595_C001       and Backsatte Outlin, OCG       and Backsatter Outlin, OCG         CS_DFTL_SIR_GOPM_2.2021092705409_20210907109595_C001       and Sassatter Outlin, OCG       and Backsatter Outlin, OCG         CS_DFTL_SIR_GOPM_2.20210927105479_2021090710959_C001       and Sassatter Outlin, OCG       and Sassatter Outlin, OCG         CS_DFTL_SIR_GOPM_2.20210927105479_2021090710959_C001       Decen Athmere Ranga SIR, SNH and Backsatter Outlin, Pla  | CS_OFFL_SIR_GOPM_2_20210902T034602_20210902T042138_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SR_GOPM_2_20210902705359_20210902705393_0001     and Booksatto Quality Good       CS_OFFL_SR_GOPM_2_20210902705259_202109027053732_0001     and Booksatto Quality Fage have been Allineter Range SSH, SWH       CS_OFFL_SR_GOPM_2_20210902705259_20210902705393_0001     Decan Allineter Range SSH, SWH     The Ocean Allineter Range SSH, SWH       CS_OFFL_SR_GOPM_2_202109027053950_00210927053950_0001     Decan Allineter Range SSH, SWH     The Ocean Allineter Range SSH, SWH       CS_OFFL_SR_GOPM_2_202109027053956_020109027054927_0001     Decan Allineter Range SSH, SWH     The Ocean Allineter Range SSH, SWH and Backsatter Cuality Fage have been Allineter Range SSH, SWH and Backsatter Cuality Fage have been Allineter Range SSH, SWH and Backsatter Cuality Fage have been Allineter Range and Backsatter Cuality Fage have been Allineter Ran   | CS_OFFL_SIR_GOPM_2_20210902T043158_20210902T043324_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_8021092105230_2021002705390_001       and Babsacter Quality, OCOG       and the COGA Mattherer Range, SINA, SWH and Backsatter Quality Flags have been Affinite Range and Backsatter Quality COCO Affinite Range and Backsatter Quality Flags have been Affinite Range Affinite Range AGM, COCO Affinite Range A   | CS_OFFL_SIR_GOPM_2_20210902T044355_20210902T050635_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_202100027053900_20210952705127_C001       and Backscatter Quality, COOG<br>Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>Attimeter Range and Backscatter Quality Flags have been atti-<br>Cas_OFFL_SIR_GOPM_2_20210002T065911_2021002T070714_0_C001         C6_OFFL_SIR_GOPM_2_20210002T065911_2021002T07070218_C001       OCCG Attimeter Range Quality, OCCG<br>Attimeter Range and Backscatter Quality Flags have been atti-<br>for on on one records.         C6_OFFL_SIR_GOPM_2_20210002T070548_10_2021007107403_0_C001       OCCG Attimeter Range SIMA, SWH<br>and Backscatter Quality, OCCG<br>Attimeter Range and Backscatter Quality Flags have been atti-<br>for on on one records.         C6_OFFL_SIR_GOPM_2_20210002T07448_2021   | CS_OFFL_SIR_GOPM_2_20210902T052550_20210902T053739_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_202109027053956_202109027064227_0001       and Backscatter Quality CoG<br>Minneter Range and Backscatter Quality Flags have been<br>Admeter Range and Backscatter Quality Flags<br>have been admeter Range and Backscatter Quality Flags have been<br>admeter Range and Backscatter Quality Flags have been<br>admeter Range and Backscatter Quality Flags have been<br>admeter Range and Backscatter Quality Flags have been admeter<br>admeter Range and Backscatter Quality Flags have been<br>admeter Range and Backscatter Quality Flags<br>and the O | CS_OFFL_SIR_GOPM_2_20210902T053900_20210902T053951_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_202109027054708_20210902706134_C001 and Backscatter Quality, CCCG and the CCCG Altimeter Range and Backscatter Quality Flags have been attraction and backscatter Quality and Backscatter Quality Flags have been attraction and backscatter Quality COCG attracter Bange and Backscatter Quality Flags have been attraction and backscatter Quality Flags have been attracter Range, SSHA, SWH and Backscatter Quality Flags have been attraction and backscatter Quality COCG attracter Bange and Backscatter Quality Flags have been attraction and backscatter Quality COCG attracter Bange and Backscatter Quality Flags have been attraction Coce Attracter Bange SSHA, SWH and Backscatter Quality Flags have been attracter GoPM_2_2021090210707316_20210902109423_20011  | CS_OFFL_SIR_GOPM_2_20210902T053958_20210902T054227_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2.20210902T061404_20210902T063130_C001       And Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T065510_20210902T065716_C001       OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T065510_20210902T065716_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T065511_20210902T070218_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T070448_20210902T0771740_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T07218_20210902T0771740_C001       OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T07218_20210902T077160_C001       OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T075316_20210902T073058_C001       OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2.20210902T075316_20210902T073058_C001       OCean Altime   | CS_OFFL_SIR_GOPM_2_20210902T054708_20210902T060134_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T063323_20210902T064741_C001       and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T065510_20210902T065716_C001       DCOG 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_20210902T065811_20210902T070218_C001       DCOG Altimeter Range Quality, OCOG Backscatter 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_20210902T070448_20210902T077140_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T072135_20210902T073058_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_20210902T075316_20210902T0703058_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_20210902T075316_20210902T075316_02010902T081023_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS  | CS_OFFL_SIR_GOPM_2_20210902T061404_20210902T063130_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T065811_20210902T070218_C001         Backscatter Quality         for one or more records.           CS_OFFL_SIR_GOPM_2_20210902T070448_20210902T0770218_C001         OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality Flags have been and Backscatter Quality, COCG Backscatter Quality, SIG, SIG, SIG, SIG, SIG, SIG, SIG, SIG  | CS_OFFL_SIR_GOPM_2_20210902T063323_20210902T064741_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T070448_20210902T071740_C001       Dcean Altimeter Range, SSHA, SWH<br>and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>Altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Fla       | CS_OFFL_SIR_GOPM_2_20210902T065510_20210902T065716_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| CS_OFFL_SIR_GOPM_2_20210902T070448_20210902T071740_C001       and backscatter Quality, CCCG<br>Altimeter Range and Backscatter Quality, Sector on or or more records.       and the OCCG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG       The Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG       The Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCCG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCCG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCCG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T082451_20210902T082429_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCCG<br>Altimeter Range and Backscatter Quality Flags have been<br>set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084432_0210902T084121_C001       OCCG Altimeter Range Quality, OCCG<br>Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084432_0210902T084121_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCCG<br>Altimeter   | CS_OFFL_SIR_GOPM_2_20210902T065811_20210902T070218_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| CS_OFFL_SIR_GOPM_2_20210902T072135_20210902T073058_C001       and Backscatter Quality, CCOG<br>Altimeter Range and Backscatter Quality, CCOG<br>Altimeter Range and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH<br>and Backscatter Quality, CCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been<br>and the CCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the CCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>have been<br>and Backscatter Quality, CCOG<br>Altimeter Range and Backscatter Quality, CCOG<br>Altimeter  | CS_OFFL_SIR_GOPM_2_20210902T070448_20210902T071740_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T075316_20210902T081023_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T082451_20210902T082451_20210902T082829_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, ITAGS<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084121_C001       OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set<br>for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084432_20210902T084432_20210902T085929_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_20210902T090440_20210902T090816_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OC   | CS_OFFL_SIR_GOPM_2_20210902T072135_20210902T073058_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T081555_20210902T082433_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>and the OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>  | CS_OFFL_SIR_GOPM_2_20210902T075316_20210902T081023_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T082451_20210902T082829_C001       and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T083310_20210902T084121_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_20210902T084432_20210902T084121_C001       OCOG Altimeter Range, SSHA, SWH<br>and Backscatter Quality       The OCOG Altimeter Range, and Backscatter Quality Flags have been set<br>for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084432_20210902T085929_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_20210902T084432_20210902T085929_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_20210902T090440_20210902T090816_C001       Ocean Altimeter Range, SSHA, SWH<br>and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality, OCOG<br>Altimeter Range and Backscatter Quality Flags have been<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags have been<br>Altimeter Range and Backscatter Quality Flags<br>and the OCOG Altimeter Range and Backscatter Quality Flags<br>and the OC   | CS_OFFL_SIR_GOPM_2_20210902T081555_20210902T082433_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T083310_20210902T084121_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T084432_20210902T085929_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG       The Ocean Altimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T0804432_20210902T085929_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality.       The Ocean Altimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210902T090440_20210902T090816_C001       Ocean Altimeter Range and Backscatter Quality.       The Ocean Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality.   | CS_OFFL_SIR_GOPM_2_20210902T082451_20210902T082829_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| CS_OFFL_SIR_GOPM_2_20210902T084432_20210902T085929_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_GOPM_2_20210902T090440_20210902T090816_C001       Ocean Altimeter Range, SSHA, SWH       and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been         Altimeter Range and Backscatter Quality, OCOG       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been         Altimeter Range and Backscatter Quality, OCOG       Altimeter Range and Backscatter Quality, OCOG       SHA, SWH and Backscatter Quality Flags have been  | CS_OFFL_SIR_GOPM_2_20210902T083310_20210902T084121_C001 |                               | The OCOG Altimeter Range and Backscatter Quality Flags have been set<br>for one or more records.   |
| CS_OFFL_SIR_GOPM_2_20210902T090440_20210902T090816_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality set for one or more records.  | CS_OFFL_SIR_GOPM_2_20210902T084432_20210902T085929_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
| Ocean Altimater Dange SSLA SWH The Ocean Altimater Dange SSLA SWH and Besterster Ocealty Flare  | CS_OFFL_SIR_GOPM_2_20210902T090440_20210902T090816_C001 | and Backscatter Quality, OCOG | and the OCOG Altimeter Range and Backscatter Quality Flags have been   |
|   | CS_OFFL_SIR_GOPM_2_20210902T094223_20210902T100826_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. |

| CS_OFFL_SIR_GOPM_2_20210902T101438_20210902T101957_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_20210902T102448_20210902T104752_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_20210902T112100_20210902T114707_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_20210902T115406_20210902T120010_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_20210902T120326_20210902T123056_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_20210902T123058_20210902T123350_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  |
| CS_OFFL_SIR_GOPM_2_20210902T123424_20210902T124120_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_20210902T125326_20210902T132512_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_20210902T133316_20210902T133843_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  |
| CS_OFFL_SIR_GOPM_2_20210902T134231_20210902T134634_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_20210902T141730_20210902T142029_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_20210902T143220_20210902T144127_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_20210902T144405_20210902T150520_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_20210902T151217_20210902T151321_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_20210902T151324_20210902T151733_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_20210902T152305_20210902T153912_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_20210902T155716_20210902T155755_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_20210902T160900_20210902T164401_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_20210902T164746_20210902T165219_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_20210902T165239_20210902T165626_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  |
| CS_OFFL_SIR_GOPM_2_20210902T170321_20210902T173507_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_20210902T173623_20210902T173909_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  |
| CS_OFFL_SIR_GOPM_2_20210902T174716_20210902T180200_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_20210902T180641_20210902T180852_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_20210902T181002_20210902T182335_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_20210902T182602_20210902T183119_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_20210902T184138_20210902T185500_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_20210902T185908_20210902T191425_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_20210902T193639_20210902T194419_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_20210902T194841_20210902T200226_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_20210902T200529_20210902T201031_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_20210902T201108_20210902T201209_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_20210902T201906_20210902T202009_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_20210902T202518_20210902T203130_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_20210902T203615_20210902T203623_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_20210902T203629_20210902T204053_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_20210902T204337_20210902T204925_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_20210902T205048_20210902T205252_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_20210902T210437_20210902T210500_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_20210902T210910_20210902T211358_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_20210902T212037_20210902T214046_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_20210902T214556_20210902T214948_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_20210902T215720_20210902T222004_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_20210902T225646_20210902T232024_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_20210902T232341_20210902T232903_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_20210902T233623_20210903T000852_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_20210902T001305_20210902T001433_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_20210902T013131_20210902T013309_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_20210902T105034_20210902T105124_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_20210902T132949_20210902T133316_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_20210902T191434_20210902T191454_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_20210902T211359_20210902T211757_C001 | OCOG Altimeter Range Quality, OCOG<br>Backscatter Quality  | The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  |
| CS_OFFL_SIR_GOPN_2_20210902T215004_20210902T215009_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_GOPR_2_20210902T024955_20210902T025117_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\_GOPR\_2\_20210902T191454\_20210902T191714\_C001Ocean Altimeter Range, SSHA, SWH<br/>and Backscatter Quality, OCOG<br/>Altimeter Range and Backscatter Quality, OCOG<br/>Altimeter Range and Backscatter QualityThe Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br/>and the OCOG Altimeter Range and Backscatter QualityCS\_OFFL\_SIR\_GOPR\_2\_20210902T201904\_20210902T201906\_C001Ocean Altimeter Range, SSHA, SWH<br/>and Backscatter Quality, OCOG<br/>Altimeter Range and Backscatter Quality, OCOG<br/>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br/>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br/>and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags<br/>and the OCOG Altimeter Range and Backscatter Quality Flags<br/>and the OCOG Altimeter Range and Backscatter Quality Flags have been

#### L2 Quality Flags (20Hz PLRM)

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

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

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

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Number of products with errors:

| Product   | Test Failed   | Description  |
|---|---|--|
| CS_OFFL_SIR_GOPN_2_20210902T010115_20210902T010228_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_20210902T010310_20210902T010422_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T012724_20210902T012829_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T013325_20210902T013659_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T020002_20210902T020318_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T030004_20210902T030115_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T031000_20210902T031218_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T033238_20210902T033352_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_20210902T033859_20210902T034215_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_20210902T051334_20210902T051610_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_20210902T051804_20210902T052347_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T061246_20210902T061404_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T065717_20210902T065811_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T070219_20210902T070355_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T073058_20210902T073319_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T075005_20210902T075104_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_20210902T081023_20210902T081555_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T083106_20210902T083310_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T084121_20210902T084309_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T090816_20210902T091201_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T092720_20210902T093308_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T101958_20210902T102232_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_20210902T104752_20210902T104849_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
|---|---|--|
| CS_OFFL_SIR_GOPN_2_20210902T105034_20210902T105124_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T115217_20210902T115406_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T133844_20210902T134001_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T142834_20210902T143102_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T150856_20210902T151217_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_20210902T153912_20210902T154239_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T155851_20210902T160111_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_20210902T183332_20210902T183531_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_20210902T191714_20210902T191930_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_20210902T193340_20210902T193639_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T202246_20210902T202518_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T203130_20210902T203603_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T204926_20210902T205047_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T205253_20210902T205806_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T211359_20210902T211757_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T215244_20210902T215505_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T223048_20210902T223210_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPN_2_20210902T223217_20210902T223629_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_20210902T224633_20210902T224755_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T010423_20210902T011153_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_20210902T014329_20210902T014620_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_20210902T014953_20210902T015312_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_20210902T020318_20210902T020716_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_20210902T024219_20210902T024955_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_20210902T024955_20210902T025117_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_20210902T025629_20210902T025853_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_20210902T030116_20210902T030324_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
|---|---|--|
| CS_OFFL_SIR_GOPR_2_20210902T032839_20210902T033238_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_20210902T034215_20210902T034602_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_20210902T042139_20210902T042854_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_20210902T042854_20210902T043158_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_20210902T050635_20210902T051333_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_20210902T060135_20210902T060746_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_20210902T063130_20210902T063322_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T074115_20210902T074402_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_20210902T074402_20210902T074805_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_20210902T075104_20210902T075248_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_20210902T092029_20210902T092153_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T092153_20210902T092720_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_20210902T100826_20210902T101040_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_20210902T102232_20210902T102448_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_20210902T105837_20210902T110042_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T110237_20210902T110737_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_20210902T114707_20210902T114959_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_20210902T124121_20210902T124938_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_20210902T132513_20210902T132949_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_20210902T134001_20210902T134231_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_20210902T141330_20210902T141612_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T142030_20210902T142833_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_20210902T150521_20210902T150855_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_20210902T151857_20210902T152305_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_20210902T154948_20210902T155310_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T160112_20210902T160859_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. |

| <ul> <li>&gt; 1Hz and 1Hz Ocean SSHA Quality Flags: These flags are currently set for<br/>Number of products with errors: 179</li> </ul> |   | d.   |
|--|---|--|
|  |   |  |
| Currently, there are several common flags raised in the Level 2 products   |   |  |
| L2 Quality Flags (1 Hz & 1Hz PLRM)   |   |  |
| CS_OFFL_SIR_GOPR_2_20210902T224131_20210902T224541_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_20210902T223630_20210902T224131_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_20210902T205806_20210902T210436_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_20210902T200226_20210902T200341_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_20210902T191931_20210902T192353_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_20210902T185500_20210902T185714_C001  | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one<br>or more records.   |
| CS_OFFL_SIR_GOPR_2_20210902T183532_20210902T184138_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_20210902T174015_20210902T174715_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_20210902T165742_20210902T170321_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_20210902T164402_20210902T164601_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. |

#### L2 Retracking Flags (20Hz)

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 (20Hz, 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.

69

138

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:

## 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.

#### 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).

0

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

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, 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.

28

#### Number of products with errors:

| Product  | Test Failed | Description   |
|--|-------------|---|
| CS OFFE SIR GOP 2 202109021001952 202109021010931 C001 |             | 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_20210902T010931_20210902T015907_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_220210902T015907_20210902T024846_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_20210902T024846_20210902T033821_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_20210902T033821_20210902T042801_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) and 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_2_20210902T042801_20210902T051736_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_20210902T051736_20210902T060715_C001 | GPD Wet Tropospheric Correction,<br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | There is an error with the GPD Wet Troposheric Correction, the MSS<br>height (solution 1) and the Mean Dynamic Topography (solution 1) for one<br>or more records   |
| CS_OFFL_SIR_GOP_2_20210902T060715_20210902T065651_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_20210902T065651_20210902T074630_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_20210902T074630_20210902T083605_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_20210902T083605_20210902T092544_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_20210902T092544_20210902T101520_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) and 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_2_20210902T101520_20210902T110459_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_2_20210902T110459_20210902T115435_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_20210902T115435_20210902T124414_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_2_20210902T124414_20210902T133349_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_2_20210902T133349_20210902T142329_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_2_20210902T142329_20210902T151304_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide                                       | There is an error with the MSS height (solution 1) and 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_2_20210902T151304_20210902T160243_C001 |   | There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records  |
| CS_OFFL_SIR_GOP_2_20210902T160243_20210902T165219_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_220210902T165219_20210902T174158_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_220210902T174158_20210902T183133_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_20210902T183133_20210902T192112_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_20210902T192112_20210902T201048_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_220210902T201048_20210902T210027_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_220210902T210027_20210902T215003_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_20210902T215003_20210902T223942_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_2_20210902T223942_20210902T232917_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   |

# 6.5 P2P Measurement Confidence Data Check

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

#### Number of products with errors:

| Product  | Test Failed         | Description  |
|--|---------------------|--|
| CS_OFFL_SIR_GOP_220210902T051736_20210902T060715_C001  | Power scaling error | There is an error in the scaling of the L2 waveform for one or more records    |
| CS_OFFL_SIR_GOP_2_20210902T083605_20210902T092544_C001 | Power scaling error | There is an error in the scaling of the L2 waveform for one or more<br>records |

## 6.6 P2P Measurement Quality Flag Check

## P2P Quality Flags (20Hz)

CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.

30

2

| DOD Quality Flags (2011- DI DM)   |  |
|---|--|
| P2P Quality Flags (20Hz PLRM)   |  |
| Since the P2P Quality Flags are copied direct                                       | tly 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 & 1Hz PLRI  | И)   |
| Since the P2P Quality Flags are copied direct                                       | tly 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 Qualit   | ty Check   |
| P2P Retracking Flags (20Hz)<br>Cryosat P2P data includes an ocean retracking of     | 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): This f  | lag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.   |
| Number of products with errors:   | 27   |
| P2P Retracking Flags PLRM   |  |
| CryoSat L2 data includes an ocean retracking qu                                     | uality 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 f  | lag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.   |
| Number of products with errors:   | 30   |
|   |  |
|   | 7. GOP QCC Report Analysis   |
| The Quality Control for CryoSat (QCC) facility pe<br>or warnings is provided below. | erforms a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors |

| Product type | No. Products | No. QCC Reports | No. Valid | No. Warnings | No. Errors |
|--------------|--------------|-----------------|-----------|--------------|------------|
| SIR_GOPM1B   | 155          | 155             | 1         | 154          | 0          |
| SIR_GOPR1B   | 100          | 100             | 0         | 100          | 0          |
| SIR_GOPN1B   | 98           | 98              | 3         | 95           | 0          |
| SIR_GOPM_2   | 155          | 155             | 100       | 55           | 0          |
| SIR_GOPR_2   | 100          | 100             | 22        | 76           | 2          |
| SIR_GOPN_2   | 98           | 98              | 41        | 57           | 0          |
| SIR_GOP_P2P  | 29           | 29              | 0         | 27           | 2          |

# 7.1 QCC Errors

| Number of QC     | C reports with        | n errors:          | 4          |                                |                  |                  |                 |   |   |   |   |
|------------------|-----------------------|--------------------|------------|--------------------------------|------------------|------------------|-----------------|---|---|---|---|
|                  |                       |                    |            |                                | Total number     | r of occurrences | s of each error |   |   |   |   |
| Product Type     | RLOBOPNCD             | F RL               | RL         | RLOBOPNCDF                     | RL               | RL               | -               | - | - | - | - |
| SIR_GOPR_2       | 2                     | 1                  | 2          | 2                              | 1                | 2                |                 |   |   |   |   |
|                  |                       | , i                | Ť.         |                                |                  |                  |                 |   |   |   |   |
| Product Type     | RLOBOPNCD             | F RL               | RLOBOPNCDF | RL                             | -                | -                | -               | - | - | - | - |
| SIR_GOP_2_       | 2                     | 2                  | 2          | 2                              |                  |                  |                 |   |   |   |   |
|                  |                       |                    |            |                                |                  |                  |                 |   |   |   |   |
| Test Description | Test Description Key: |                    |            |                                |                  |                  |                 |   |   |   |   |
| Abbreviation     | Test                  | name               |            | Details                        | Details          |                  |                 |   |   |   |   |
| RLOBOPNCDF       | Rang                  | eLatitudeOrBlankOP | 7NetCDF    | Latitude should be             | between -90E7 ar | nd 90E7          |                 |   |   |   |   |
|                  | Deres                 | - Latitude O       |            | Lather deside states and dates | h                | 10050            |                 |   |   |   |   |

| 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 |
| RL         | RangeLongitude_6                | Longitude should be between -180E6 and 180E6 |
| RL         | RangeLongitude_7                | Longitude should be between -180E7 and 180E7 |
| · -=       | 5 5 1                           |  |

# 7.2 QCC Warnings

| Product Type               | BCSHNCDF           | IOHHMOOR           | MVIOEPFDNCDF    | nber of occurrences o<br>MVIOEPNCDF | MVIONCDF              | RBSZOPOEPFDNCDF   | RBSZOPOEPFDPLRMN |
|----------------------------|--------------------|--------------------|-----------------|-------------------------------------|-----------------------|-------------------|------------------|
| SIR GOPM1B                 | 154                | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR GOPM 2                 | 0                  | 0                  | 44              | 43                                  | 0                     | 42                | 0                |
| SIR GOPN1B                 | 93                 | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR GOPN 2                 | 0                  | 0                  | 8               | 28                                  | 4                     | 26                | 30               |
| SIR GOPR1B                 | 97                 | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR GOPR 2                 | 0                  | 2                  | 37              | 44                                  | 0                     | 39                | 35               |
|                            | 1                  |                    |                 |                                     |                       | 1                 |                  |
| Product Type               | RBSZOPOEPNCDF      | RNELPOTONCDF       | RPEPOPFDLRMNCDF | RPEPOPFDPLRMSAR                     | NCERPEPOPFDPLRMSINNCE | RPEPOPFDSARNCDF   | RPEPOPFDSINNCDF  |
| SIR_GOPM1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPM_2                 | 32                 | 1                  | 40              | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPN1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPN_2                 | 17                 | 0                  | 0               | 0                                   | 22                    | 0                 | 30               |
| SIR_GOPR1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPR_2                 | 20                 | 1                  | 0               | 50                                  | 0                     | 58                | 0                |
|                            |                    |                    |                 |                                     |                       |                   |                  |
| Product Type               | RPEPOPLRMNCDF      | RPEPOPSARNCDF      | RPEPOPSINNCDF   | RSSBCONCDF                          | RSSHAOFDNCDF          | RSSHAOFDPLRMNCDF  | RSSHAONCDF       |
| SIR_GOPM1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPM_2                 | 32                 | 0                  | 0               | 3                                   | 22                    | 0                 | 2                |
| SIR_GOPN1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 | 0                |
| SIR_GOPN_2                 | 0                  | 0                  | 26              | 21                                  | 41                    | 46                | 32               |
| SIR_GOPR1B                 | 0                  | 0<br>49            | 0               | 0                                   | 0<br>66               | 0<br>47           | 0                |
| SIR_GOPR_2                 | 0                  | 49                 | 0               | 3                                   | 66                    | 47                | 12               |
| Product Type               | RSWHOEPFDNCDF      | RSWHOEPFDPLRMNCDF  | RSWHOEPNCDF     | SOOHHIFHD                           | SCSTODHRNCDF          | SCSTODNCDF        | -                |
| SIR GOPM1B                 | 0                  | 0                  | 0               | 0                                   | 0                     | 0                 |                  |
| SIR GOPM 2                 | 42                 | 0                  | 4               | 0                                   | 0                     | 0                 |                  |
| SIR GOPN1B                 | 0                  | 0                  | 0               | 0                                   | 46                    | 2                 |                  |
| SIR GOPN 2                 | 27                 | 30                 | 18              | 1                                   | 0                     | 0                 |                  |
| SIR GOPR1B                 | 0                  | 0                  | 0               | 0                                   | 100                   | 1                 |                  |
| SIR_GOPR_2                 | 39                 | 55                 | 2               | 2                                   | 0                     | 0                 |                  |
|                            |                    |                    |                 |                                     |                       |                   |                  |
|                            | IOHHMOOR           | MVIOEPFDNCDF       | MVIOEPNCDF      | MVIONCDF                            | RBSZOPOEPFDNCDF       | RBSZOPOEPFDPLRMNO |                  |
| Product Type               | 10                 | 29                 | 29              | 4                                   | 29                    | 16                | 29               |
| Product Type<br>SIR_GOP_2_ | 18                 | 29                 | 20              |                                     |                       |                   |                  |
|                            | 18<br>RNELPOTONCDF | RPEPOPFDPLRMSINNCD |                 | RPEPOPSINNCDF                       | RSSBCONCDF            | RSSHAOFDNCDF      | RSSHAOFDPLRMNC   |

| BCSHNCDF Burs<br>IOHHMOOR Inde   | st name<br>rstCounterStep20HzNetCI<br>lexOf1Hzin20HzMappingO | ·                        | 17           | 19<br>Details  | 29                              |                                 |                            |
|--|--|--------------------------|--------------|--|---------------------------------|---------------------------------|----------------------------|
| Abbreviation         Tes           BCSHNCDF         Burs           IOHHMOOR         Inde | rstCounterStep20HzNetCI<br>lexOf1Hzin20HzMappingC            | DF                       |              | Details  |                                 |                                 |                            |
| Abbreviation         Tes           BCSHNCDF         Burs           IOHHMOOR         Inde | rstCounterStep20HzNetCI<br>lexOf1Hzin20HzMappingC            | DF                       |              | Details  |                                 |                                 |                            |
| IOHHMOOR Inde  | lexOf1Hzin20HzMappingC                                       | DF                       |              |  |                                 |                                 |                            |
|  |  |                          |              | The burst counter should be                              | one higher with regard to th    | e previous burst counter        |                            |
| MVIOEPFDNCDF Miss  | sind/alueIntOceanExclud                                      | utOfRange                |              | The mapping of 20 Hz to 1 H                              | Iz measurements should be       | in the range 0 to (number of    | 1 Hz samples - 1)          |
|  | 55ing value into ocun Exolut                                 | lingPolarFD2NetCDF       |              | The value should not be a 'n                             | nissing value' for surface type | e 0 only for latitudes between  | -70 and 70 degrees         |
| MVIOEPNCDF Miss  | ssingValueIntOceanExclud                                     | lingPolarNetCDF          |              | The value should not be a 'n                             | nissing value' for surface type | e 0 only for latitudes between  | -70 and 70 degrees         |
| MVIONCDF Miss  | ssingValueIntOceanNetCD                                      | F                        |              | The value should not be a 'n                             | nissing value' for surface type | e 0 only                        |                            |
| RBSZOPOEPFDNCDF Ran  | ngeBackscatterSigmaZero                                      | OPOceanExcludingPolarF   | 02NetCDF     | The backscatter sigma zero<br>between -70 and 70 degrees |                                 | 7500 (or missing) for surface   | type = ocean for latitudes |
| RBSZOPOEPFDPLRM Ran  | ngeBackscatterSigmaZero                                      | OPOceanExcludingPolarF   | 02PLRMNetCDF | The backscatter sigma zero<br>between -70 and 70 degrees |                                 | 7500 (or missing) for surface   | type = ocean for latitudes |
| RBSZOPOEPNCDF Ran  | ngeBackscatterSigmaZerc                                      | OPOceanExcludingPolarNe  | etCDF        |  | should be between 700 and       | 7500 (or missing) for surface   | type = ocean for latitudes |
| RNELPOTONCDF Ran   | ngeNELPOceanTideOcea   | nNetCDF                  |              |  |                                 | ht should be between -40mm      | and 40mm (or missing) for  |
| RPEPOPFDLRMNCDF Ran  | ngePeakinessExcludingPo                                      | olarOPFD2LRMNetCDF       |              |  | etween 0 and 6400 (or missir    | ng) for surface type = ocean f  | or latitudes between -70   |
| RPEPOPFDPLRMSAR Ran  | ngePeakinessExcludingPo                                      | olarOPFD2PLRMSARNetCE    |              |  | etween 0 and 15000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
| NCDF<br>RPEPOPFDPLRMSINN Ran   | ngePeakinessExcludingPo                                      | olarOPFD2PLRMSINNetCD    | F            |  | etween 0 and 90000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
|  | ngePeakinessExcludingPo                                      | blarOPFD2SARNetCDF       |              |  | etween 0 and 15000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
| RPEPOPFDSINNCDF Ran  | ngePeakinessExcludingPo                                      | olarOPFD2SINNetCDF       |              |  | etween 0 and 90000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
| RPEPOPLRMNCDF Ran  | ngePeakinessExcludingPo                                      | blarOPLRMNetCDF          |              |  | etween 0 and 6400 (or missir    | ng) for surface type = ocean f  | or latitudes between -70   |
| RPEPOPSARNCDF Ran  | ngePeakinessExcludingPo                                      | blarOPSARNetCDF          |              |  | etween 0 and 15000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
| RPEPOPSINNCDF Ran  | ngePeakinessExcludingPo                                      | olarOPSINNetCDF          |              |  | etween 0 and 90000 (or miss     | ing) for surface type = ocean   | for latitudes between -70  |
| RSSBCONCDF Ran   | ngeSeaStateBiasCorrectio                                     | onOceanNetCDF            |              |  | n should be between -500mr      | m and 0mm (or missing) for s    | urface type = ocean        |
| RSSHAOFDNCDF Ran   | ngeSeaSurfaceHeightAno                                       | malyOceanFD3NetCDF       |              | The sea surface height anor<br>ocean                     | maly should be between -300     | 00mm and 3000mm (or missi       | ng) for surface type =     |
| RSSHAOFDPLRMNCD Ran  | ngeSeaSurfaceHeightAno                                       | malyOceanFD3PLRMNetCI    | DF           |  | maly should be between -300     | 00mm and 3000mm (or missi       | ng) for surface type =     |
| RSSHAONCDF Ran   | ngeSeaSurfaceHeightAno                                       | malyOceanNetCDF          |              |  | maly should be between -300     | 00mm and 3000mm (or missi       | ng) for surface type =     |
| RSWHOEPFDNCDF Ran  | ngeSignificantWaveHeight                                     | OceanExcludingPolarFD2N  | letCDF       |  |                                 | d 15000mm (or missing) for s    | urface type = ocean for    |
| RSWHOEPFDPLRMN Ran   | ngeSignificantWaveHeight                                     | OceanExcludingPolarFD2P  | LRMNetCDF    |  | should be between 0mm and       | d 15000mm (or missing) for s    | urface type = ocean for    |
|  | ngeSignificantWaveHeight                                     | OceanExcludingPolarNetCl | DF           |  | should be between 0mm and       | d 15000mm (or missing) for s    | urface type = ocean for    |
| SOOHHIFHD Sam  | meOrOneHigher1HzIndex  | For20HzData              |              |  |                                 | r 1 higher than its previous sa | ample                      |
| SCSTODHRNCDF Sequ  | quenceCounterStepTODH  | RNetCDF                  |              | The sequence counter shou                                | ld be modulo 4 higher with re   | egard to the previous sequen    | ce counter                 |
| SCSTODNCDF Sequ  | quenceCounterStepTODN  | etCDF                    |              | The sequence counter shou                                | ld be one higher (modulo 16     | 384) with regard to the previo  | us sequence counter        |

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0