

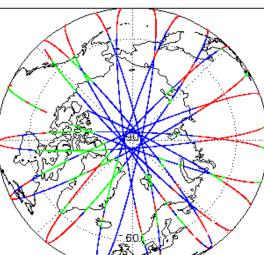
# **QA4EO Daily Report for IOP data:**

<u>18/01/2021</u>

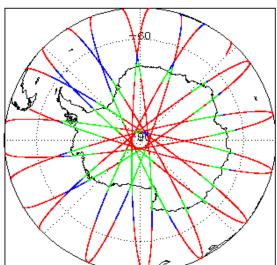
| nort Broduction   | 21-Jan-2021                       | Check                                      | L1 & L2                 | P2P                    |
|-------------------|-----------------------------------|--|-------------------------|------------------------|
| eport Production: | 21-Jan-2021                       | Server check: science-pds.cryosat.esa.int  | Nominal                 | Nominal                |
| Processor Used:   | CriveSet Oscer Breeseer           | Server check: calval-pds.cryosat.esa.int   | Nominal                 | Nominal                |
| Processor Used:   | CryoSat Ocean Processor           | Product Software Check                     | Nominal                 | Nominal                |
| Data Used:        | Intermediate Ocean Products (IOP) | Product Format Check                       | Nominal                 | Nominal                |
| Data Used:        | 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    | Nominal                |
|                   |                                   | 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. |

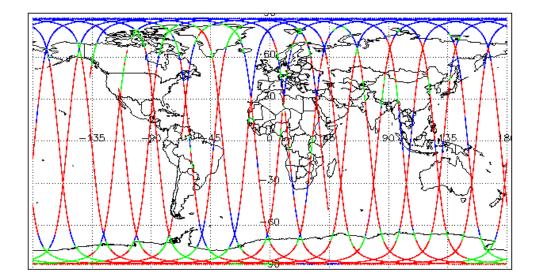
1. Overview

| Mission / Instru | ment News       |
|------------------|-----------------|
| 17-Jan-2021      | None            |
| 18-Jan-2021      | None            |
| 19-Jan-2021      | Nothing planned |













# 3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

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

# 4. IOP 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).

Number of products with errors:

| 4.2 L1B Product Header Analysis   |   |   |
|---|---|---|
| For all products, a series of pre-defined checks are performed on the MPH and   | d SPH in order to identify any inc  | onsistencies and/or errors raised by the ground-segment processing chain.   |
| L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1<br>OSARIn chains. A modification is required in the next release.  | B IOPR and IOPN products beca   | use the I1b_processing_quality_hr field is not correctly configured in the OSAR an  |
| Number of products with errors: 0   |   |   |
| 4.3 L1B Auxilary Data File Usage Check  |   |   |
| Each product is checked for missing Data Set Descriptors with respect to a pro  | e-determined baseline and also to   | o check the validity of Auxiliary Data Files is correct.  |
| Number of products with errors: 0   |   |   |
| 1.4 L1B Auxiliary Correction Error Check  |   |   |
| CryoSat L1B data includes a correction error flag for each measurement recor  | d. The bit value of this flag indica  | ites any problems when set.   |
| Number of products with errors: 0   |   |   |
| 4.5 L1B Measurement Confidence Data Check   |   |   |
| r<br>Ceria Cat I. 4D. data includes a magazinement confidence flor for each magazine  | ment second. The hit velue of this  | fler indicates and making when est  |
| CryoSat L1B data includes a measurement confidence flag for each measurer   |   | • •   |
| Attitude Correction Missing: This flag is currently set in error for IOPR produ   | ucts due to a configuration issue.  | This is being investigated and will be updated in the next SW update.   |
|   |   |   |
| 4.6 L1B Waveform Group Data Check   | d. The bit value of this flag indica  | tes any problems when set.  |
| 4.6 L1B Waveform Group Data Check<br>CryoSat L1B data includes a waveform data flag for each measurement recorn<br>Loss of Echo Flag: This flag is currently set for products over land, but this is  | -   | tes any problems when set.  |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15   | -   | tes any problems when set.  Description   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product   | to be expected.   |   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement recorn.         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001  | to be expected.   | Description   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         coss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T004639_C001   | to be expected. Test Failed Loss of Echo  | Description<br>The tracking echo is missing for one or more records   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record.         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T004639_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001  | to be expected.           Test Failed           Loss of Echo           Loss of Echo   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T004639_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001   | Test Failed       Loss of Echo       Loss of Echo       Loss of Echo  | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records  |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T004639_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001         CS_OFFL_SIR_IOPN1B_20210118T054803_20210118T054844_C001   | to be expected.           Test Failed           Loss of Echo   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records  |
| <b>4.6 L1B Waveform Group Data Check</b> CryoSat L1B data includes a waveform data flag for each measurement record         coss of Echo Flag: This flag is currently set for products over land, but this is         Jumber of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPM1B_20210118T034932_20210118T034639_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001         CS_OFFL_SIR_IOPN1B_20210118T054803_20210118T054844_C001         CS_OFFL_SIR_IOPN1B_20210118T07734_20210118T071030_C001   | Test Failed         Loss of Echo   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records  |
| <b>4.6 L1B Waveform Group Data Check</b> CryoSat L1B data includes a waveform data flag for each measurement record         coss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T04525_20210118T004639_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001         CS_OFFL_SIR_IOPN1B_20210118T054803_20210118T054844_C001         CS_OFFL_SIR_IOPN1B_20210118T070734_20210118T071030_C001         CS_OFFL_SIR_IOPN1B_20210118T07734_20210118T071332_C001  | Test Failed         Loss of Echo  | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records  |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record         coss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T004639_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001         CS_OFFL_SIR_IOPN1B_20210118T070734_20210118T071303_C001         CS_OFFL_SIR_IOPN1B_20210118T071120_20210118T071332_C001         CS_OFFL_SIR_IOPN1B_20210118T07135526_20210118T05551_C001  | Test Failed         Loss of Echo         Loss of Echo | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record.         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product       15         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T004525_20210118T036020_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001         CS_OFFL_SIR_IOPN1B_20210118T070734_20210118T071302_C001         CS_OFFL_SIR_IOPN1B_20210118T071120_20210118T071332_C001         CS_OFFL_SIR_IOPN1B_20210118T135526_20210118T135551_C001         CS_OFFL_SIR_IOPN1B_20210118T171235_20210118T171717_C001   | to be expected.           Test Failed           Loss of Echo  | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records   |
| 4.6 L1B Waveform Group Data Check         CryoSat L1B data includes a waveform data flag for each measurement record.         Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       15         Product       15         CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001       16         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001       17         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035521_C001       16         CS_OFFL_SIR_IOPN1B_20210118T054803_20210118T054844_C001       16         CS_OFFL_SIR_IOPN1B_20210118T07734_20210118T071332_C001       16         CS_OFFL_SIR_IOPN1B_20210118T071120_20210118T071332_C001       17         CS_OFFL_SIR_IOPN1B_20210118T071120_20210118T175551_C001       16         CS_OFFL_SIR_IOPN1B_20210118T171235_20210118T171777_C001       17         CS_OFFL_SIR_IOPN1B_20210118T171235_20210118T171717_C001       16   | to be expected.   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records  |
| 4.6 L1B Waveform Group Data Check<br>CryoSat L1B data includes a waveform data flag for each measurement recorn<br>Loss of Echo Flag: This flag is currently set for products over land, but this is  | to be expected.   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records   |
| 4.6 L1B Waveform Group Data Check           CryoSat L1B data includes a waveform data flag for each measurement record.           Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         15           Product         15           CS_OFFL_SIR_IOPM1B_20210118T023816_20210118T030016_C001         CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T034639_C001           CS_OFFL_SIR_IOPN1B_20210118T034932_20210118T035020_C001         CS_OFFL_SIR_IOPN1B_20210118T035116_20210118T035521_C001           CS_OFFL_SIR_IOPN1B_20210118T07034_20210118T071030_C001         CS_OFFL_SIR_IOPN1B_20210118T07132_C001           CS_OFFL_SIR_IOPN1B_20210118T071120_20210118T071332_C001         CS_OFFL_SIR_IOPN1B_20210118T171235_20210118T171771_C001           CS_OFFL_SIR_IOPN1B_20210118T171235_20210118T171717_C001         CS_OFFL_SIR_IOPN1B_20210118T185140_20210118T185249_C001           CS_OFFL_SIR_IOPN1B_20210118T185140_20210118T185249_C001         CS_OFFL_SIR_IOPN1B_20210118T185140_20210118T185249_C001 | to be expected.   | Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records |

# 5. IOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

Loss of Echo

#### 5.1 L2 Product Format Check

CS\_OFFL\_SIR\_IOPR1B\_20210118T070615\_20210118T070734\_C001

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: 0

#### 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any 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).

0

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 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.

> Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.

> Mean Dynamic Topography: The error value is currently set for products over land and 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.

| Product   | Test Failed   | Description   |
|---|---|---|
| CS_OFFL_SIR_IOPM_2_20210118T101652_20210118T101801_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or more records   |
| CS_OFFL_SIR_IOPM_2_20210118T222328_20210118T225102_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or more records   |
| CS_OFFL_SIR_IOPN_2_20210118T012411_20210118T012723_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T020848_20210118T021006_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T030227_20210118T030604_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T031141_20210118T031304_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T035116_20210118T035521_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records |
| CS_OFFL_SIR_IOPN_2_20210118T044925_20210118T045111_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T053324_20210118T053417_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T062725_20210118T062945_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T071120_20210118T071332_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records |
| CS_OFFL_SIR_IOPN_2_20210118T075738_20210118T075939_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T080624_20210118T081058_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T084804_20210118T085156_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)  |
| CS_OFFL_SIR_IOPN_2_20210118T093751_20210118T094023_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T094743_20210118T094927_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T112643_20210118T112818_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T130341_20210118T130659_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T143609_20210118T143728_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T144237_20210118T144548_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES), Non-Equilibrium Long Period<br>Ocean Tide | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), and tidal corrections for one or more records                                |
| CS_OFFL_SIR_IOPN_2_20210118T162142_20210118T162712_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)  |
| CS_OFFL_SIR_IOPN_2_20210118T171235_20210118T171717_C001 | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)  | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records |
| CS_OFFL_SIR_IOPN_2_20210118T185140_20210118T185249_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)  |
| CS_OFFL_SIR_IOPN_2_20210118T203058_20210118T203650_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)   |
| CS_OFFL_SIR_IOPN_2_20210118T211345_20210118T211533_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T212344_20210118T212607_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T221110_20210118T221254_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPN_2_20210118T235309_20210118T235727_C001 | Mean Sea Surface (1), Total Geocentric<br>Ocean Tide (GOT)  | There is an error with the MSS height (solution 1) and the Total Geocentric<br>Ocean Tide (solution 1: GOT) for one or more records   |
| CS_OFFL_SIR_IOPR_2_20210118T002458_20210118T002640_C001 | Mean Dynamic Topography (1)   | There is an error with the Mean Dynamic Topography height for one or<br>more records  |
| CS_OFFL_SIR_IOPR_2_20210118T003551_20210118T004342_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)   |
| CS_OFFL_SIR_IOPR_2_20210118T021237_20210118T022643_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)   |
| CS_OFFL_SIR_IOPR_2_20210118T035521_20210118T040311_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)   |

| CS_OFFL_SIR_IOPR_2_20210118T053418_20210118T053958_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) |
|---|--|--|
| CS_OFFL_SIR_IOPR_2_20210118T070328_20210118T070434_C001 | Mean Dynamic Topography (1)                          | There is an error with the Mean Dynamic Topography height for one or more records                      |
| CS_OFFL_SIR_IOPR_2_20210118T071333_20210118T072023_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) |
| CS_OFFL_SIR_IOPR_2_20210118T085157_20210118T085714_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) |
| CS_OFFL_SIR_IOPR_2_20210118T103000_20210118T104011_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) |
| CS_OFFL_SIR_IOPR_2_20210118T120754_20210118T121528_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) |
| CS_OFFL_SIR_IOPR_2_20210118T122444_20210118T122642_C001 | Mean Dynamic Topography (1)                          | There is an error with the Mean Dynamic Topography height for one or more records                      |
| CS_OFFL_SIR_IOPR_2_20210118T134536_20210118T135332_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) |
| CS_OFFL_SIR_IOPR_2_20210118T135332_20210118T135455_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) |
| CS_OFFL_SIR_IOPR_2_20210118T152541_20210118T153231_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) |
| CS_OFFL_SIR_IOPR_2_20210118T153232_20210118T154717_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) |
| CS_OFFL_SIR_IOPR_2_20210118T170707_20210118T171124_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) |
| CS_OFFL_SIR_IOPR_2_20210118T171124_20210118T171235_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) |
| CS_OFFL_SIR_IOPR_2_20210118T184502_20210118T184819_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) |
| CS_OFFL_SIR_IOPR_2_20210118T184819_20210118T185140_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) |
| CS_OFFL_SIR_IOPR_2_20210118T202432_20210118T203058_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) |
| CS_OFFL_SIR_IOPR_2_20210118T220620_20210118T221110_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) |
| CS_OFFL_SIR_IOPR_2_20210118T234320_20210118T235308_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) |
|   | I  | '  |

## 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:

## 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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86

Number of products with errors:

| Product   | Test Failed  | Description  |
|---|--|--|
| CS_OFFL_SIR_IOPM_2_20210117T235545_20210118T001447_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_IOPM_2_20210118T001706_20210118T002112_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_IOPM_2_20210118T004639_20210118T012131_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_IOPM_2_20210118T012724_20210118T013239_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_IOPM_2_20210118T013437_20210118T013721_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_IOPM_2_20210118T013921_20210118T014205_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_IOPM_2_20210118T021006_20210118T021236_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_IOPM_2_20210118T022644_20210118T023530_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_IOPM_2_20210118T023816_20210118T030016_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_IOPM_2_20210118T030733_20210118T031140_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_IOPM_2_20210118T031347_20210118T032647_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_IOPM_2_20210118T032835_20210118T033553_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_IOPM_2_20210118T033636_20210118T034110_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_IOPM_2_20210118T040701_20210118T043928_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_IOPM_2_20210118T045726_20210118T050957_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_IOPM_2_20210118T051003_20210118T052739_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_IOPM_2_20210118T052906_20210118T053323_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_IOPM_2_20210118T054405_20210118T054418_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_IOPM_2_20210118T054844_20210118T060049_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_IOPM_2_20210118T060253_20210118T061838_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_IOPM_2_20210118T062023_20210118T062523_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_IOPM_2_20210118T062602_20210118T062725_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_IOPM_2_20210118T063440_20210118T064504_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_IOPM_2_20210118T065124_20210118T070218_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_IOPM_2_20210118T073831_20210118T073925_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_IOPM_2_20210118T074253_20210118T075723_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_IOPM_2_20210118T075939_20210118T080435_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_IOPM_2_20210118T081105_20210118T084500_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_IOPM_2_20210118T091253_20210118T093409_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_IOPM_2_20210118T093427_20210118T093726_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_IOPM_2_20210118T094023_20210118T094353_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_IOPM_2_20210118T094415_20210118T094743_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_IOPM_2_20210118T095007_20210118T101642_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_IOPM_2_20210118T105051_20210118T111626_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_IOPM_2_20210118T111807_20210118T112308_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_IOPM_2_20210118T113036_20210118T120432_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_IOPM_2_20210118T124956_20210118T125603_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_IOPM_2_20210118T125807_20210118T130340_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_IOPM_2_20210118T130942_20210118T134259_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_IOPM_2_20210118T141614_20210118T143522_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_IOPM_2_20210118T143729_20210118T144237_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_IOPM_2_20210118T144814_20210118T152238_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_IOPM_2_20210118T154717_20210118T155138_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_IOPM_2_20210118T155234_20210118T161010_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_IOPM_2_20210118T162846_20210118T164411_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_IOPM_2_20210118T164531_20210118T164602_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_IOPM_2_20210118T165043_20210118T165751_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_IOPM_2_20210118T171749_20210118T173536_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_IOPM_2_20210118T173700_20210118T175054_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_IOPM_2_20210118T175851_20210118T180052_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_IOPM_2_20210118T180737_20210118T182312_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_IOPM_2_20210118T182514_20210118T183437_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_IOPM_2_20210118T190245_20210118T191341_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_IOPM_2_20210118T192944_20210118T193335_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_IOPM_2_20210118T193658_20210118T194457_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_IOPM_2_20210118T194722_20210118T200220_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_IOPM_2_20210118T203915_20210118T211300_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_IOPM_2_20210118T211533_20210118T211742_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_IOPM_2_20210118T211807_20210118T212344_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_IOPM_2_20210118T212622_20210118T215133_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_IOPM_2_20210118T222328_20210118T225102_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_IOPM_2_20210118T225743_20210118T230219_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_IOPM_2_20210118T230313_20210118T230337_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_IOPM_2_20210118T230523_20210118T232556_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_IOPM_2_20210118T233344_20210118T233348_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_IOPM_2_20210118T235727_20210119T003021_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_IOPN_2_20210118T020656_20210118T020657_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_IOPN_2_20210118T064859_20210118T064912_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_IOPN_2_20210118T090855_20210118T091217_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_IOPN_2_20210118T143609_20210118T143728_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_IOPN_2_20210118T162142_20210118T162712_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_IOPN_2_20210118T183438_20210118T183726_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_IOPN_2_20210118T191341_20210118T191348_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_IOPN_2_20210118T212344_20210118T212607_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_IOPN_2_20210118T220038_20210118T220059_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_IOPN_2_20210118T220146_20210118T220208_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_IOPN_2_20210118T221605_20210118T221727_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_IOPR_2_20210118T002229_20210118T002345_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_IOPR_2_20210118T020710_20210118T020847_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_IOPR_2_20210118T044638_20210118T044644_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_IOPR_2_20210118T054614_20210118T054619_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_IOPR_2_20210118T140435_20210118T140802_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_IOPR_2_20210118T152517_20210118T152538_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_IOPR_2_20210118T152541_20210118T153231_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_IOPR_2_20210118T225102_20210118T225314_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. |

Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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.

| Product   | Test Failed   | Description  |
|---|---|--|
| CS_OFFL_SIR_IOPN_2_20210118T003007_20210118T003130_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T003251_20210118T003314_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_IOPN_2_20210118T004525_20210118T004639_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_IOPN_2_20210118T012411_20210118T012723_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T020501_20210118T020623_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T020628_20210118T020655_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T030149_20210118T030223_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_IOPN_2_20210118T030227_20210118T030604_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_IOPN_2_20210118T031141_20210118T031304_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T035116_20210118T035521_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T043936_20210118T044104_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T053324_20210118T053417_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_IOPN_2_20210118T053959_20210118T054047_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_IOPN_2_20210118T070734_20210118T071030_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_IOPN_2_20210118T071120_20210118T071332_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_IOPN_2_20210118T075738_20210118T075939_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T080624_20210118T081058_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_IOPN_2_20210118T084804_20210118T085156_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_IOPN_2_20210118T093751_20210118T094023_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_IOPN_2_20210118T104017_20210118T104051_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |
| CS_OFFL_SIR_IOPN_2_20210118T104052_20210118T104131_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one o<br>more records.  |

OCOG Backscatter Quality

CS\_OFFL\_SIR\_IOPN\_2\_20210118T112643\_20210118T112818\_C001

The OCOG Range and Backscatter Quality Flags have been set for one or OCOG Altimeter Range Quality PLRM, more records.

| CS_OFFL_SIR_IOPN_2_20210118T120432_20210118T120605_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or more records.  |
|---|---|--|
| CS_OFFL_SIR_IOPN_2_20210118T123703_20210118T124036_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T125651_20210118T125806_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_IOPN_2_20210118T162142_20210118T162712_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_IOPN_2_20210118T170638_20210118T170707_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_IOPN_2_20210118T171235_20210118T171717_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T183438_20210118T183726_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T185140_20210118T185249_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_IOPN_2_20210118T185359_20210118T185531_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T193432_20210118T193658_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T203058_20210118T203650_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_IOPN_2_20210118T211345_20210118T211533_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_IOPN_2_20210118T212344_20210118T212607_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_IOPN_2_20210118T215133_20210118T215241_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T215346_20210118T215536_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T221605_20210118T221727_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T221816_20210118T222309_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T225314_20210118T225455_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPN_2_20210118T235309_20210118T235727_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T001641_20210118T001705_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T002458_20210118T002640_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_IOPR_2_20210118T003000_20210118T003007_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T003131_20210118T003209_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T003404_20210118T003457_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T003518_20210118T003524_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_IOPR_2_20210118T003551_20210118T004342_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_IOPR_2_20210118T012131_20210118T012410_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. |
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| CS_OFFL_SIR_IOPR_2_20210118T014205_20210118T014618_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T020303_20210118T020501_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T021237_20210118T022643_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_IOPR_2_20210118T035041_20210118T035116_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_IOPR_2_20210118T035521_20210118T040311_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T040411_20210118T040700_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T053418_20210118T053958_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_IOPR_2_20210118T054457_20210118T054610_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_IOPR_2_20210118T054635_20210118T054707_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T064912_20210118T065057_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T070328_20210118T070434_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T070615_20210118T070734_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_IOPR_2_20210118T071030_20210118T071120_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_IOPR_2_20210118T073406_20210118T073831_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T073925_20210118T074252_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T084501_20210118T084705_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T085157_20210118T085714_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_IOPR_2_20210118T085747_20210118T085904_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_IOPR_2_20210118T091218_20210118T091253_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T094927_20210118T095007_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_IOPR_2_20210118T103000_20210118T104011_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_IOPR_2_20210118T120606_20210118T120650_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T120754_20210118T121528_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_IOPR_2_20210118T121752_20210118T122051_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T122744_20210118T122831_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |

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|---|---|--|
| CS_OFFL_SIR_IOPR_2_20210118T130659_20210118T130941_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_IOPR_2_20210118T134404_20210118T134531_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_IOPR_2_20210118T134536_20210118T135332_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_IOPR_2_20210118T135332_20210118T135455_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_IOPR_2_20210118T135552_20210118T135652_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_IOPR_2_20210118T135916_20210118T140224_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T140435_20210118T140802_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T152338_20210118T152409_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T152541_20210118T153231_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_IOPR_2_20210118T164412_20210118T164531_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_IOPR_2_20210118T165751_20210118T170244_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_IOPR_2_20210118T170517_20210118T170638_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_IOPR_2_20210118T170707_20210118T171124_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_IOPR_2_20210118T175055_20210118T175615_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_IOPR_2_20210118T184502_20210118T184819_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_IOPR_2_20210118T185531_20210118T185956_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T194709_20210118T194721_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_IOPR_2_20210118T200220_20210118T201035_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_IOPR_2_20210118T202432_20210118T203058_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_IOPR_2_20210118T203650_20210118T203915_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_IOPR_2_20210118T220214_20210118T220432_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_IOPR_2_20210118T220452_20210118T220547_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_IOPR_2_20210118T220620_20210118T221110_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_IOPR_2_20210118T234016_20210118T234229_C001 | OCOG Altimeter Range Quality PLRM,<br>OCOG Backscatter Quality  | The OCOG Range and Backscatter Quality Flags have been set for one or<br>more records.   |
| CS_OFFL_SIR_IOPR_2_20210118T234320_20210118T235308_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. |
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# L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

| Number of products with errors: 201   |  |  |
|---|--|--|
| 5.8 L2 Ocean Retracking Quality Check   |  |  |
| L2 Retracking Flags (20Hz)  |  |  |
| CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea  | -  |  |
| Ocean Retracking Quality Flag: This flag is currently set for products over la  | nd 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: 58  |  |  |
| L2 Retracking Flags (20Hz, PLRM)  |  |  |
| CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz PLR  | M measurement record. The bit value of this fla  | ag indicates any problems when set.  |
| Ocean Retracking Quality Flag (PLRM): This flag is currently set for product  | s IOPR and IOPN products over sea ice, but th  | is is to be expected.  |
| Number of products with errors: 150   |  |  |
| 6. IOP L2   | 2 Pole-to-Pole Data Quality  | Check  |
| 6.1 P2P Product Format Check  |  |  |
| Each product, retrieved and unpacked from the science server, is checked to e   | ensure it consists of both an XML header file (.   | HDR) and a NetCDF product file (.nc).  |
| Number of products with errors: 0   |  |  |
|   |  |  |
| 6.2 P2P Product Header Analysis   |  |  |
| For all products, a series of pre-defined checks are performed on the MPH and Number of products with errors: 0   | d SPH in order to identify any inconsistencies a   | 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  | e-determined baseline and also to check the va   | alidity of Auxiliary Data Files is correct.  |
| Number of products with errors: 0   |  |  |
| 6.4 P2P Auxiliary Correction Error Check  |  |  |
|   |  |  |
| For all products, the auxiliary corrections within the Geophysical Group are ch   |  |  |
| Currently, there are some common auxiliary correction errors raised in the followed by a table highlighting any additional issues which may arise fr  |  | to surface type. All common hags are summarised in the list below  |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for  | d vector. This is a known anomaly (CRYO-CO   | P-3) and will be resolved in a future IPF update. The affected products an   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land an<br>> Mean Dynamic Topography: The error value is currently set for products o  | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expect<br>nd sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected   | IP-3) and will be resolved in a future IPF update. The affected products an<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land and<br>> Mean Dynamic Topography: The error value is currently set for products over<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of the speed Error walk was altimetric walk was a | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expect<br>nd sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected   | IP-3) and will be resolved in a future IPF update. The affected products ar<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land an<br>> Mean Dynamic Topography: The error value is currently set for products o<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30   | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expectent<br>and sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected<br>over land and sea ice, but this is to be expected  | IP-3) and will be resolved in a future IPF update. The affected products an<br>ed.   |
| <ul> <li>&gt; ECMWF Meteo Corrections: Currently the following corrections are not correction and the U-Wind and V-Wind components of the ECMWF model wirnor reported in the table below.</li> <li>&gt; Sea State Bias &amp; Sea State Bias PLRM: The error value is currently set for products over land at</li> <li>&gt; Mean Sea Surface: The error value is currently set for products over land at</li> <li>&gt; Mean Dynamic Topography: The error value is currently set for products o</li> <li>&gt; Attimetric Wind Speed Error: The error value is currently set for products of Number of products with errors: 30</li> <li>Product</li> <li>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001</li> </ul>   | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expectent<br>and sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected<br>over land and sea ice, but this is to be expected  | IP-3) and will be resolved in a future IPF update. The affected products ar<br>ed.<br>d.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land and<br>> Mean Dynamic Topography: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product  | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expectent<br>and sea ice, but this is to be expected.<br>wer land and sea ice, but this is to be expected<br>over land and sea ice, but this is to be expected<br>the sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and sea ice, but this is to be expected<br>wer land and be expected wer land and be expected wer land and be expected<br>wer land and be expected wer land and be expected wer land and be expected wer l | IP-3) and will be resolved in a future IPF update. The affected products an<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products o<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_220210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_220210118T003816_20210118T012752_C001  | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expected<br>and sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected<br>over land and sea ice, but this is to be expected<br>Test Failed<br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)<br>Mean Sea Surface (1), Mean Dynamic  | IP-3) and will be resolved in a future IPF update. The affected products an<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products o<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T003816_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001   | d vector. This is a known anomaly (ČRYO-CO<br>products over sea ice, but this is to be expected<br>and sea ice, but this is to be expected.<br>wer land and sea ice, but this is to be expected<br>over land and sea ice, but this is to be expected<br><b>Test Failed</b><br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)<br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)<br>Mean Sea Surface (1), Mean Dynamic   | P-3) and will be resolved in a future IPF update. The affected products a<br>ed.   |
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| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products o<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T030706_20210118T035646_C001   | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expected<br>and sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea Surface (1), Mean Dynamic<br>Topography (1)<br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | IP-3) and will be resolved in a future IPF update. The affected products an ed. ed. <b>Description</b> There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1), the Mean Dynami Topography (solution 1).  |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land al<br>> Mean Dynamic Topography: The error value is currently set for products o<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001  | d vector. This is a known anomaly (CRYO-CO<br>products over sea ice, but this is to be expected<br>and sea ice, but this is to be expected.<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea ice, but this is to be expected<br>ver land and sea Surface (1), Mean Dynamic<br>Topography (1)<br>Mean Sea Surface (1), Mean Dynamic<br>Topography (1)  | P-3) and will be resolved in a future IPF update. The affected products a<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products or<br>> Altimetric Wind Speed Error: The error value is currently set for products or<br>> Altimetric Wind Speed Error: The error value is currently set for products or<br>> Altimetric Wind Speed Error: The error value is currently set for products or<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T003816_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T030706_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001   | Index of the sector. This is a known anomaly (CRYO-CO         Products over sea ice, but this is to be expected.         Index of the sea ice, but the sea ice, but this ice, base ice, bas  | IP-3) and will be resolved in a future IPF update. The affected products an ed. ed. <b>Description</b> There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1), the Mean Dynami Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1). There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1).  |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>Mean Sea Surface: The error value is currently set for products over land and<br>Mean Dynamic Topography: The error value is currently set for products or<br>Attimetric Wind Speed Error: The error value is currently set for products or<br>Attimetric Wind Speed Error: The error value is currently set for products or<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T030706_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001   | Index of the expected of the ex  | P-3) and will be resolved in a future IPF update. The affected products and<br>ed.<br><b>Description</b><br>There is an error with the MSS height (solution 1) and the Mean Dynami<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynami<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynami<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynami<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynami<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography height (solution 1)  |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land and<br>> Mean Dynamic Topography: The error value is currently set for products over<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T04621_20210118T04621_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001  | Index of the set of the   | IP-3) and will be resolved in a future IPF update. The affected products and ed. ed. Intere is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography (solution 1). There is an error with the MSS height (solution 1), the Mean Dynami Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) There is an error with the MSS  |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Aumber of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T030706_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T062535_C001<br>CS_OFFL_SIR_IOP_2_20210118T062535_20210118T071515_C001  | rd vector. This is a known anomaly (CRYO-CO         r products over sea ice, but this is to be expected.         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         wean Sea Surface (1), Mean Dynamic Topography (1)         Mean Sea Surface (  | P-3) and will be resolved in a future IPF update. The affected products a<br>ed.<br><b>Description</b><br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography (solution 1)<br>There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1), the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1), the Mean Dynam<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1), and the Mean Dynam<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1), and the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1) and the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1) and the Mean Dynami |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>Mean Sea Surface: The error value is currently set for products over land at<br>Mean Dynamic Topography: The error value is currently set for products of<br>Atimetric Wind Speed Error: The error value is currently set for products of<br>Vumber of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T062535_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T080450_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T080450_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T080450_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T080450_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T080450_C001  | rd vector. This is a known anomaly (CRYO-CO         r products over sea ice, but this is to be expected.         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         wean Sea Surface (1), Mean Dynamic         Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topography (1)         Mean Sea Surface (1), Mean Dynamic <td>P-3) and will be resolved in a future IPF update. The affected products a<br/>ed.</td>  | P-3) and will be resolved in a future IPF update. The affected products a<br>ed.   |
| Correction and the U-Wind and V-Wind components of the ECMWF model wir<br>not reported in the table below.<br>> Sea State Bias & Sea State Bias PLRM: The error value is currently set for<br>> Mean Sea Surface: The error value is currently set for products over land at<br>> Mean Dynamic Topography: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Altimetric Wind Speed Error: The error value is currently set for products of<br>> Number of products with errors: 30<br>Product<br>CS_OFFL_SIR_IOP_2_20210117T234837_20210118T003816_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T012752_C001<br>CS_OFFL_SIR_IOP_2_20210118T012752_20210118T021731_C001<br>CS_OFFL_SIR_IOP_2_20210118T021731_20210118T030706_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T035646_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T035646_20210118T044621_C001<br>CS_OFFL_SIR_IOP_2_20210118T044621_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T053600_C001<br>CS_OFFL_SIR_IOP_2_20210118T053600_20210118T071515_C001<br>CS_OFFL_SIR_IOP_2_20210118T071515_20210118T071515_C001  | rd vector. This is a known anomaly (CRYO-CO         r products over sea ice, but this is to be expected.         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         ver land and sea ice, but this is to be expected         wean Sea Surface (1), Mean Dynamic         Topography (1)         Mean Sea Surface (1), Mean Dynamic  | P-3) and will be resolved in a future IPF update. The affected products a<br>ed.<br><b>Description</b><br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1), the Mean Dynam<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records<br>There is an error with the MSS height (solution 1), the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)<br>There is an error with the MSS height (solution 1) and the Mean Dynam<br>Topography height (solution 1)  |

CS\_OFFL\_SIR\_IOP\_2\_\_20210118T103344\_20210118T112320\_C001

Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

| CS_OFFL_SIR_IOP_220210118T112320_20210118T121259_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)  |  |  |  |
|---|--|---|--|--|--|
| CS_OFFL_SIR_IOP_220210118T121259_20210118T130234_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T130234_20210118T135214_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T135214_20210118T144149_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T144149_20210118T153128_C001                     | Mean Sea Surrace (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT), Total Geocentric Ocean<br>Tide (FES) Non-Fouilibrium Long Perior | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), and tidal corrections for one or more records                                |  |  |  |
| CS_OFFL_SIR_IOP_2_20210118T153128_20210118T162103_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)  |  |  |  |
| CS_OFFL_SIR_IOP_2_20210118T162103_20210118T171043_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)  |  |  |  |
| CS_OFFL_SIR_IOP_2_20210118T171043_20210118T180018_C001                    | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)   | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records |  |  |  |
| CS_OFFL_SIR_IOP_220210118T180018_20210118T184957_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)  |  |  |  |
| CS_OFFL_SIR_IOP_2_20210118T184957_20210118T193933_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T193933_20210118T202912_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T202912_20210118T211847_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T211847_20210118T220827_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)  |  |  |  |
| CS_OFFL_SIR_IOP_2_20210118T220827_20210118T225802_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T225802_20210118T234742_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)  |  |  |  |
| CS_OFFL_SIR_IOP_220210118T234742_20210119T003717_C001                     | Mean Sea Surface (1), Mean Dynamic<br>Topography (1), Total Geocentric Ocean<br>Tide (GOT)   | There is an error with the MSS height (solution 1), the Mean Dynamic<br>Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:<br>GOT) for one or more records |  |  |  |
| 6.5 P2P Measurement Confidence Data Check                                 |  |   |  |  |  |
| CryoSat P2P data includes a measurement confidence flag for each 20-Hz me | easurement record. The bit value of this flag in   | dicates any problems when set.  |  |  |  |
| Number of products with errors: 0   | · · · · · · · · · · · · · · · · · · ·  | · ·   |  |  |  |
| 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. Since the P2P Quality Flags are copied directly 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 (20Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 29 P2P Quality Flags (1 Hz & 1Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. 30 Number of products with errors: 6.8 P2P Ocean Retracking Quality Check P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retracking 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 flag is currently set for products IOPR and IOPN 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 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 IOPR and IOPN products over sea ice, but this is to be expected.

30

Number of products with errors:

#### 7. IOP QCC Report Analysis

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

| Product type | No. Products | No. QCC Reports | No. Valid | No. Warnings | No. Errors |
|--------------|--------------|-----------------|-----------|--------------|------------|
| SIR_IOPM1B   | 217          | 217             | 4         | 213          | 0          |
| SIR_IOPR1B   | 129          | 108             | 3         | 105          | 0          |
| SIR_IOPN1B   | 108          | 129             | 0         | 129          | 0          |

| SIR_IOPM_2  | 217 | 217 | 168 | 49 | 0 |
|-------------|-----|-----|-----|----|---|
| SIR_IOPR_2  | 129 | 108 | 46  | 62 | 0 |
| SIR_IOPN_2  | 108 | 129 | 45  | 79 | 5 |
| SIR_IOP_P2P | 29  | 29  | 0   | 26 | 3 |
|             |     |     |     |    |   |

# 7.1 QCC Errors

Number of QCC reports with errors:

16

| Total number of occurrences of each error |                   |                   |            |  |                  |           |   |   |   |   |   |
|---|-------------------|-------------------|------------|--|------------------|-----------|---|---|---|---|---|
| Product Type                              | RLOBOPNCDF        | RL                | RL         | RLOBOPNCDF                                   | RL               | RL        | - | - | - | - | - |
| SIR_IOPR_2                                | 5                 | 1                 | 5          | 5  | 1                | 5         |   |   |   |   |   |
|   |                   |                   |            |  |                  |           |   |   |   |   |   |
| Product Type                              | RLOBOPNCDF        | RL                | RLOBOPNCDF | RL   | -                | -         | - | - | - | - | - |
| SIR_IOP_2_                                | 3                 | 3                 | 3          | 3  |                  |           |   |   |   |   |   |
|   |                   |                   |            |  |                  |           |   |   |   |   |   |
| Test Descriptio                           | n Key:            |                   |            |  |                  |           |   |   |   |   |   |
| Abbreviation                              | Test name Details |                   |            |  |                  |           |   |   |   |   |   |
| RLOBOPNCDF                                | RangeLa           | atitudeOrBlankOP_ | 7NetCDF    | Latitude should be between -90E7 and 90E7    |                  |           |   |   |   |   |   |
| RL  | RangeLa           | atitude_6         |            | Latitude should be between -90E6 and 90E6    |                  |           |   |   |   |   |   |
| RL  | RangeLa           | atitude_7         |            | Latitude should be between -90E7 and 90E7    |                  |           |   |   |   |   |   |
| RLOBOPNCDF                                | RangeLo           | ongitudeOrBlankOF | _7NetCDF   | Longitude should be between -180E7 and 180E7 |                  |           |   |   |   |   |   |
| RL  | RangeLo           | ongitude_6        |            | Longitude should b                           | e between -180E6 | and 180E6 |   |   |   |   |   |

# 7.2 QCC Warnings

| nber of QCC repo | orts with warnings | 2201               | Total num         | ber of occurrences of | each warning        |                   |                  |
|------------------|--------------------|--------------------|-------------------|-----------------------|---------------------|-------------------|------------------|
| Product Type     | BCSHNCDF           | IOHHMOOR           | MVIOEPFDNCDF      | MVIOEPNCDF            | MVIONCDF            | RBSZOPOEPFDNCDF   | RBSZOPOEPFDPLRMN |
| SIR IOPM1B       | 213                | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR IOPM 2       | 0                  | 0                  | 36                | 39                    | 0                   | 39                | 0                |
| SIR IOPN1B       | 105                | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR IOPN 2       | 0                  | 0                  | 10                | 29                    | 5                   | 22                | 22               |
| SIR IOPR1B       | 123                | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPR_2       | 0                  | 5                  | 29                | 52                    | 0                   | 27                | 23               |
|                  |                    |                    |                   |                       |                     |                   |                  |
| Product Type     | RBSZOPOEPNCDF      | RNELPOTONCDF       | RPEPOPFDLRMNCDF   | RPEPOPFDPLRMSARN      | CERPEPOPFDPLRMSINNC | DIRPEPOPFDSARNCDF | RPEPOPFDSINNCDF  |
| SIR_IOPM1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPM_2       | 32                 | 0                  | 33                | 0                     | 0                   | 0                 | 0                |
| SIR_IOPN1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPN_2       | 13                 | 0                  | 0                 | 0                     | 20                  | 0                 | 29               |
| SIR_IOPR1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPR_2       | 11                 | 1                  | 0                 | 54                    | 0                   | 60                | 0                |
|                  |                    | 1                  |                   | r                     | r                   | - I               | 1                |
| Product Type     | RPEPOPLRMNCDF      | RPEPOPSARNCDF      | RPEPOPSINNCDF     | RSSBCONCDF            | RSSHAOFDNCDF        | RSSHAOFDPLRMNCDF  | RSSHAONCDF       |
| SIR_IOPM1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPM_2       | 29                 | 0                  | 0                 | 4                     | 22                  | 0                 | 5                |
| SIR_IOPN1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPN_2       | 0                  | 0                  | 27                | 16                    | 39                  | 52                | 23               |
| SIR_IOPR1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR_IOPR_2       | 0                  | 50                 | 0                 | 2                     | 65                  | 40                | 14               |
| Product Type     | RSWHOEPFDNCDF      | RSWHOEPFDPLRMNCDF  | RSWHOEPNCDF       | SPHRTASCNSNCDF        | SOOHHIFHD           | SCSTODHRNCDF      | SCSTODNCDF       |
| SIR IOPM1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 0                 | 0                |
| SIR IOPM 2       | 31                 | 0                  | 3                 | 0                     | 0                   | 0                 | 0                |
| SIR IOPN1B       | 0                  | 0                  | 0                 | 1                     | 0                   | 44                | 2                |
| SIR IOPN 2       | 21                 | 27                 | 12                | 0                     | 0                   | 0                 | 0                |
| SIR IOPR1B       | 0                  | 0                  | 0                 | 0                     | 0                   | 129               | 14               |
| SIR_IOPR_2       | 37                 | 52                 | 2                 | 0                     | 12                  | 0                 | 0                |
|                  |                    |                    |                   |                       |                     |                   |                  |
| Product Type     | IOHHMOOR           | MVIOEPFDNCDF       | MVIOEPNCDF        | MVIONCDF              | RBSZOPOEPFDNCDF     | RBSZOPOEPFDPLRMNC | DRBSZOPOEPNCDF   |
| SIR_IOP_2_       | 17                 | 28                 | 29                | 5                     | 29                  | 16                | 27               |
|                  |                    | 1                  |                   |                       | -                   | -                 |                  |
| Product Type     | RNELPOTONCDF       | RPEPOPFDPLRMSINNCD |                   | RPEPOPSINNCDF         | RSSBCONCDF          | RSSHAOFDNCDF      | RSSHAOFDPLRMNCDF |
| SIR_IOP_2_       | 1                  | 18                 | 26                | 23                    | 16                  | 29                | 18               |
| Product Type     | RSSHAONCDF         | RSWHOEPFDNCDF      | RSWHOEPFDPLRMNCDF | RSWHOEPNCDF           | SPHLPQWNCDF         | -                 | -                |
| SIR IOP 2        | 23                 | 29                 | 17                | 14                    | 29                  |                   |                  |
|                  |                    | ~~                 | ••                |                       |                     |                   |                  |
| Product Type     | -                  | -                  | -                 | -                     | -                   | -                 | -                |
| SIR IOP 2        |                    |                    |                   |                       |                     |                   |                  |

| Test Description Key: | est Description Key:  |   |  |  |  |  |  |
|-----------------------|---|---|--|--|--|--|--|
| Abbreviation          | Test name   | Details   |  |  |  |  |  |
| BCSHNCDF              | BurstCounterStep20HzNetCDF                                  | The burst counter should be one higher with regard to the previous burst counter  |  |  |  |  |  |
| IOHHMOOR              | IndexOf1Hzin20HzMappingOutOfRange                           | The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)  |  |  |  |  |  |
| MVIOEPFDNCDF          | MissingValueIntOceanExcludingPolarFD2NetCDF                 | The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees                                  |  |  |  |  |  |
| MVIOEPNCDF            | MissingValueIntOceanExcludingPolarNetCDF                    | The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees                                  |  |  |  |  |  |
| MVIONCDF              | MissingValueIntOceanNetCDF                                  | The value should not be a 'missing value' for surface type 0 only   |  |  |  |  |  |
| RBSZOPOEPFDNCDF       | RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF     | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes<br>between -70 and 70 degrees |  |  |  |  |  |
| RBSZOPOEPFDPLRM       | RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees    |  |  |  |  |  |
| RBSZOPOEPNCDF         | RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF        | The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes<br>between -70 and 70 degrees |  |  |  |  |  |
| RNELPOTONCDF          | RangeNELPOceanTideOceanNetCDF                               | The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for<br>surface type = ocean         |  |  |  |  |  |
| RPEPOPFDLRMNCDF       | RangePeakinessExcludingPolarOPFD2LRMNetCDF                  | The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees                |  |  |  |  |  |
| RPEPOPFDPLRMSAR       | RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF              | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees               |  |  |  |  |  |
|                       | RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF              | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees               |  |  |  |  |  |
| RPEPOPFDSARNCDF       | RangePeakinessExcludingPolarOPFD2SARNetCDF                  | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees               |  |  |  |  |  |
| RPEPOPFDSINNCDF       | RangePeakinessExcludingPolarOPFD2SINNetCDF                  | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees               |  |  |  |  |  |
| RPEPOPLRMNCDF         | RangePeakinessExcludingPolarOPLRMNetCDF                     | The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70<br>and 70 degrees                |  |  |  |  |  |
| RPEPOPSARNCDF         | RangePeakinessExcludingPolarOPSARNetCDF                     | The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                  |  |  |  |  |  |

| RPEPOPSINNCDF   | RangePeakinessExcludingPolarOPSINNetCDF                    | The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees                      |
|-----------------|--|---|
| RSSBCONCDF      | RangeSeaStateBiasCorrectionOceanNetCDF                     | The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean  |
| RSSHAOFDNCDF    | RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF                 | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSSHAOFDPLRMNCD | RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF             | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSSHAONCDF      | RangeSeaSurfaceHeightAnomalyOceanNetCDF                    | The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type =<br>ocean                                    |
| RSWHOEPFDNCDF   | RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF     | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
| RSWHOEPFDPLRMNC | RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
|                 | RangeSignificantWaveHeightOceanExcludingPolarNetCDF        | The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for<br>latitudes between -70 and 70 degrees |
| SPHRTASCNSNCDF  | SPH_Rel_Time_ASC_Node_Start_v2_NetCDF                      | Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)   |
| SOOHHIFHD       | SameOrOneHigher1HzIndexFor20HzData                         | The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample  |
| SCSTODHRNCDF    | SequenceCounterStepTODHRNetCDF                             | The sequence counter should be modulo 4 higher with regard to the previous sequence counter   |
| SCSTODNCDF      | SequenceCounterStepTODNetCDF                               | The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter   |

7.3 Missing QCC Reports

Number of products with missing QCC reports:

0