

## 1. Overview

Report Production:	11-Apr-2023	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data	

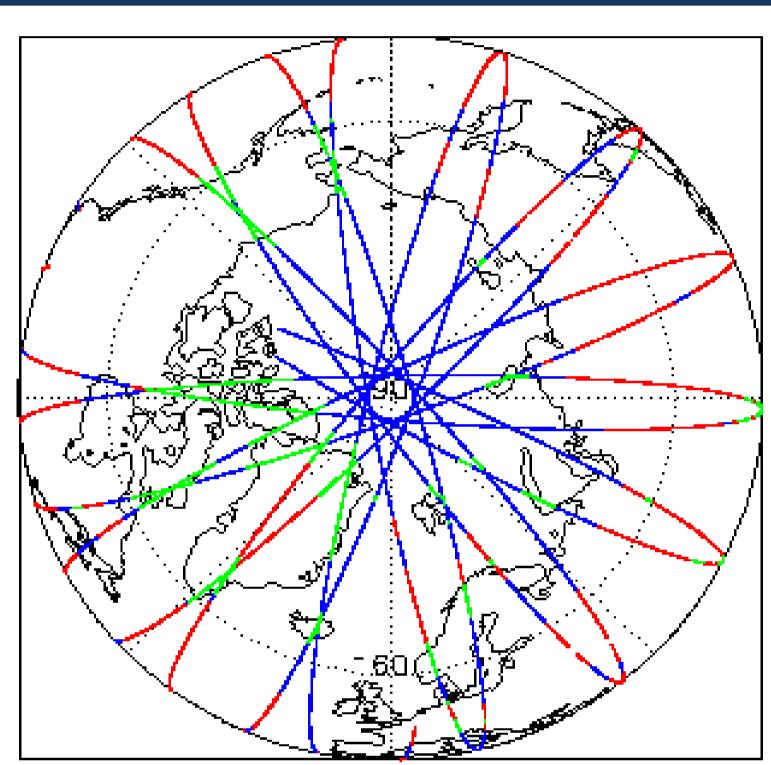
We would love to hear from you!
Please let us know your feedback about these daily
quality reports: What do you like/ dislike? What quality
information do you need? Send your feedback to

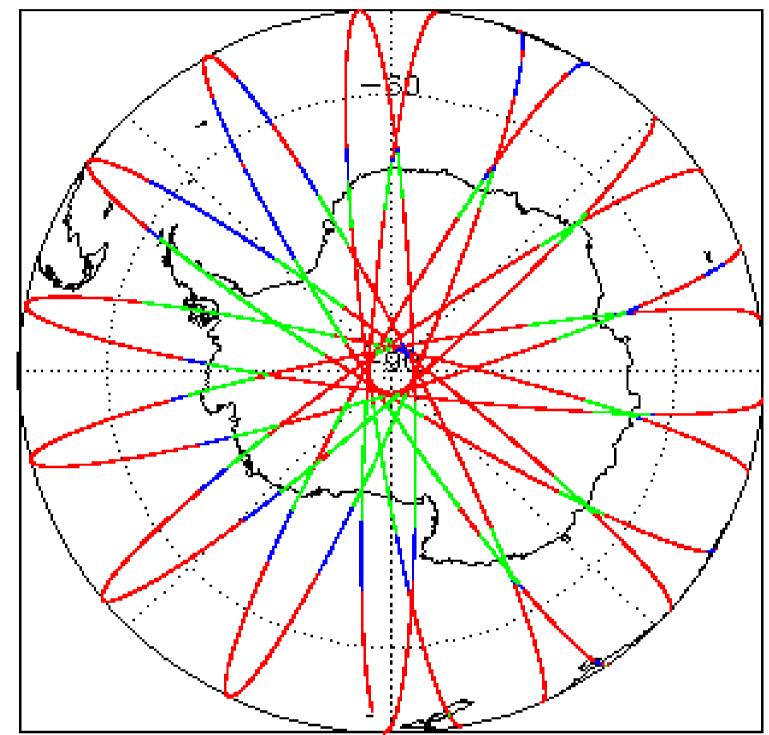
cs2\_qc\_team@telespazio.com

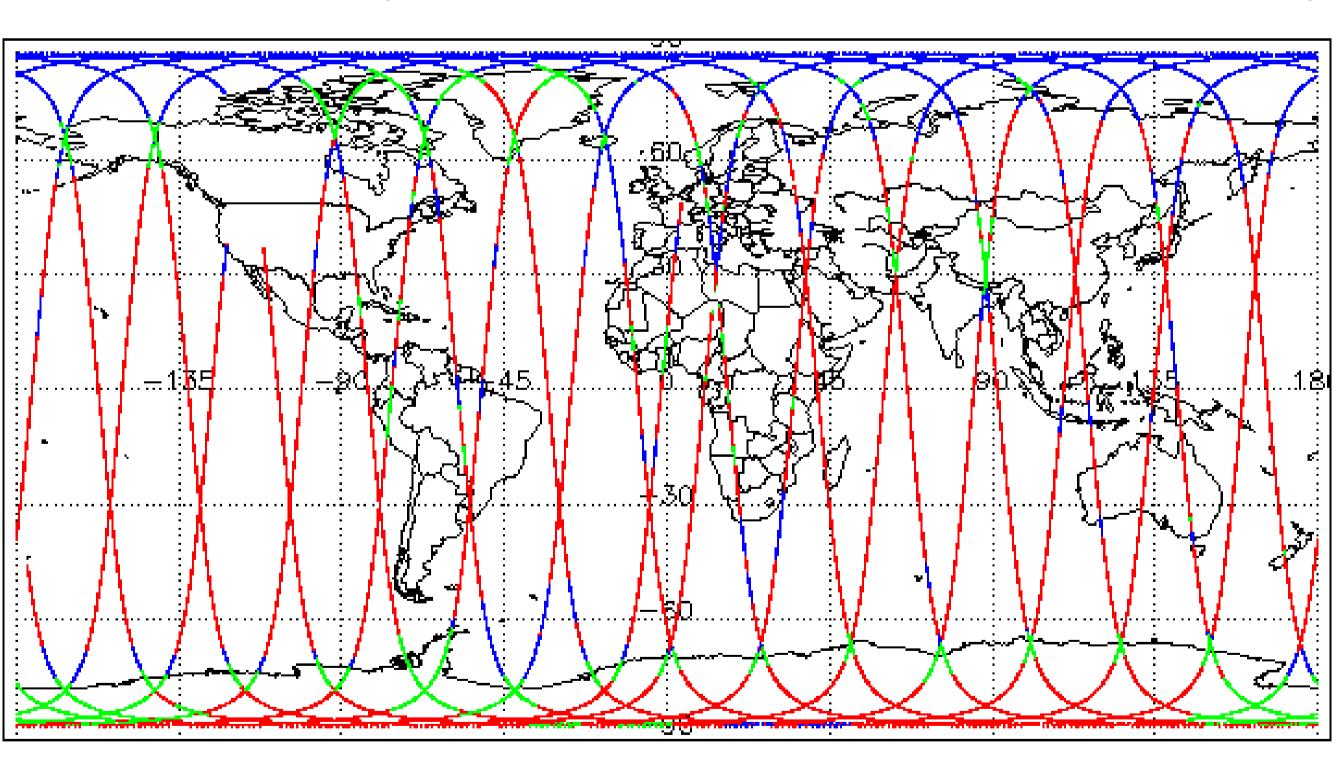
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

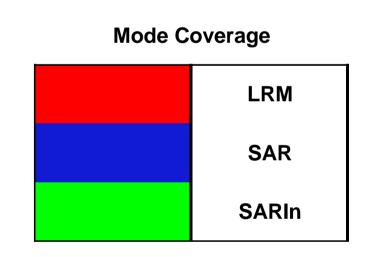
Mission / Instrument News	
08-Mar-2023	SIRAL unavailability from 15:32:25 to 17:22:16 due to a planned orbit manoeuvre.
09-Mar-2023	None
10-Mar-2023	Nothing planned

# 2. Global Coverage









## 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

## 4. GOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

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

#### 4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The I1b\_proc\_flag\_hr flag is currently set all L1B GOPR and GOPN products because the I1b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.

**Number of products with errors:** 

#### 4.3 L1B Auxilary Data File Usage Check

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

**Number of products with errors:** 

#### 4.4 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set.

**Number of products with errors:** 

#### 4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.

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

**Number of products with errors:** 

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20230309T064513_20230309T070949_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

#### 4.6 L1B Waveform Group Data Check

CryoSat L1B data includes a waveform data flag for each measurement record. The bit value of this flag indicates any problems when set.

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

Number of products with errors: 13

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20230309T022453_20230309T023118_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20230309T024100_20230309T024237_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T030855_20230309T031016_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T031331_20230309T031548_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T062734_20230309T063224_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T075943_20230309T080047_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T125804_20230309T130119_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T143921_20230309T144018_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T171223_20230309T171715_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230309T224937_20230309T225100_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230309T030744_20230309T030855_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230309T093044_20230309T093249_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230309T160853_20230309T161038_C001	Loss of Echo	The tracking echo is missing for one or more records

## 5. GOP Level 2 Data Quality Check

### **5.1 L2 Product Format Check**

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

**Number of products with errors:** 

## **5.2 L2 Product Header Analysis**

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

**Number of products with errors:** 

#### **5.3 L2 Auxiliary Data File Usage Check**

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

Number of products with errors:

#### **5.4 L2 Auxiliary Correction Error Check**

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

**Number of products with errors:** 

	<b>-</b>	
Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20230309T092952_20230309T093044_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T003301_20230309T003424_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T003907_20230309T004235_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T021345_20230309T021621_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T030855_20230309T031016_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T031331_20230309T031548_C001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOPN_2_20230309T034910_20230309T035510_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T040226_20230309T040404_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T044820_20230309T045033_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T054133_20230309T054327_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T062734_20230309T063224_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T075943_20230309T080047_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T085020_20230309T085140_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T085156_20230309T085417_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20230309T103012_20230309T103325_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T103844_20230309T104001_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T120854_20230309T121213_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T121742_20230309T121907_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T125804_20230309T130119_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20230309T135545_20230309T135726_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T143921_20230309T144018_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T152438_20230309T152620_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T153331_20230309T153544_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T161719_20230309T161933_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T170350_20230309T170537_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T171223_20230309T171715_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T175402_20230309T175758_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T185332_20230309T185527_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T225111_20230309T225149_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230309T234203_20230309T234329_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

CS_OFFL_SIR_GOPN_2_20230309T234839_20230309T235146_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPR_2_20230309T012232_20230309T012858_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T012858_20230309T013026_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T030151_20230309T030744_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T030744_20230309T030855_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T044443_20230309T044820_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T045748_20230309T045847_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T062103_20230309T062734_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GPD Wet Tropospheric correction, the MSS height (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_GOPR_2_20230309T080243_20230309T080759_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T093044_20230309T093249_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T093611_20230309T093812_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T094148_20230309T094946_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T112022_20230309T112914_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T130120_20230309T130841_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T144018_20230309T144600_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T144616_20230309T144736_C001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOPR_2_20230309T161934_20230309T162238_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T162238_20230309T162619_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T175759_20230309T180319_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T193619_20230309T194626_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T211346_20230309T211826_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T211826_20230309T212123_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T213143_20230309T213227_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T225230_20230309T225932_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230309T225932_20230309T230057_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

## 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20230309T064513_20230309T070949_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

## **5.6 L2 Measurement Quality Flag Check**

### L2 Quality Flags (20 Hz)

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20230309T001219_20230309T001708_C001	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230309T001856_20230309T003201_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T003425_20230309T003907_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T004426_20230309T005123_C001	_	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T005133_20230309T011739_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T013804_20230309T014218_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T014349_20230309T020646_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T021006_20230309T021030_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T022453_20230309T023118_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T024100_20230309T024237_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T024718_20230309T025435_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T030105_20230309T030108_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T031016_20230309T031331_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T031554_20230309T032136_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T032302_20230309T033118_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T033333_20230309T034835_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T035511_20230309T035728_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T035805_20230309T040226_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T040404_20230309T041110_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T041232_20230309T041906_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T042220_20230309T043529_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T045848_20230309T050447_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T050609_20230309T050833_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T051440_20230309T053033_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T053301_20230309T054133_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T054337_20230309T060635_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CQC Miner Race auth, 2009 CQC Miner Race aut	CS_OFFL_SIR_GOPM_2_20230309T064513_20230309T070949_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
Control   Cont	CS_OFFL_SIR_GOPM_2_20230309T071210_20230309T071403_C001		
Sept.   Sept.   Color   Colo	CS_OFFL_SIR_GOPM_2_20230309T071458_20230309T071939_C001		, ,
Delin Light	CS_OFFL_SIR_GOPM_2_20230309T072231_20230309T072555_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
So CPPL SIR COPPL 2 JEZISCOCCIDITATE CODE SIZES AND	CS_OFFL_SIR_GOPM_2_20230309T072736_20230309T074859_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
## PASSAGE (2014)   Court A finese Rays SS4, 50H	CS_OFFL_SIR_GOPM_2_20230309T082122_20230309T084856_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
DS_OFFL_SIR_COPPL_2.023003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223003FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223000FT(0010_2.020300FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223000FT00205_CO01  CS_OFFL_SIR_COPPL_2.0223000FT0	CS_OFFL_SIR_GOPM_2_20230309T085417_20230309T090012_C001		
65_CFTL_SR_COPM_2_000000011000002_20000001000001_20000001000000_20000001000000_200000000	CS_OFFL_SIR_GOPM_2_20230309T090140_20230309T092303_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFF_SR_GOPM_2_2223000T109591_2023300T1075F_COT	CS_OFFL_SIR_GOPM_2_20230309T092306_20230309T092950_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and flushescates Quality, COOD Alternetic Range and Septionate Quality Flags have been set CS_OFFL_SR_GOPM_2_20230309110106_20230391101323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_20230391101323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_20230391101323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_20230391101323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_20230391101323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_202303910111323_C0001  CS_OFFL_SR_GOPM_2_20230309110106_202303910111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_202303901111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_202303901111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_20230390111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111323_C000309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111333_C0230309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111333_C0230309111323_C0001  CS_OFFL_SR_GOPM_2_20230309111333_C0230309111333_C0001  CS_OFFL_SR_GOPM_2_20230309111333_C0230309111333_C000309111333_C0	CS_OFFL_SIR_GOPM_2_20230309T093903_20230309T094011_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backstrate Quality Corone Afference Range, SSHA, SWH and Backstrate Quality Flags and the COGA Afference Range, SSHA, SWH and Backstrate Quality Flags and the COGA Afference Range, SSHA, SWH and Backstrate Quality Flags and the COGA Afference Range, SSHA, SWH and Backstrate Quality Flags and the COGA Afference Range, SSHA, SWH and Backstrate Quality Flags have been set from one more records.  CS_OFFL_SIR_GOPM_2_202203097110622_202303097110690_C001  CS_OFFL_SIR_GOPM_2_202203097110622_202303097110690_C001  CS_OFFL_SIR_GOPM_2_202203097110622_202303097110690_C001  CS_OFFL_SIR_GOPM_2_202203097110622_202303097110690_C001  CS_OFFL_SIR_GOPM_2_202203097110622_202303097110690_C001  CS_OFFL_SIR_GOPM_2_202203097112123_2023030971217001  CS_OFFL_SIR_GOPM_2_202203097121213_202303097121742_C001  CS_OFFL_SIR_GOPM_2_202203097121316_202203097121742_C001  CS_OFFL_SIR_GOPM_2_202203097121316_202203097124710_C001  CS_OFFL_SIR_GOPM_2_202203097121316_202203097124710_C001  CS_OFFL_SIR_GOPM_2_202203097124740_C001  CS_OFF	CS_OFFL_SIR_GOPM_2_20230309T095251_20230309T102757_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality CS_OFFL_SIR_GOPM_2_202333971104012_20233097104522_023309710450_C001  CS_OFFL_SIR_GOPM_2_20233397110422_2023099710460_C001  CS_OFFL_SIR_GOPM_2_20233397111622_2023099710460_C001  CS_OFFL_SIR_GOPM_2_20233397111622_20230997110460_C001  CS_OFFL_SIR_GOPM_2_20233397111623_20230997111050_C001  All mater Range and Backscatter Quality and Backscatter Quality CS_OFFL_SIR_GOPM_2_202333997111623_20230997110460_C001  CS_OFFL_SIR_GOPM_2_202333997111203_20230997110400_C001  CS_OFFL_SIR_GOPM_2_202333997111203_20230997110400_C001  CS_OFFL_SIR_GOPM_2_2023339971120717_C001  CS_OFFL_SIR_GOPM_2_2023339971120717_C001  CS_OFFL_SIR_GOPM_2_2023339971120717_C001  CS_OFFL_SIR_GOPM_2_2023339971120717_C001  CS_OFFL_SIR_GOPM_2_2023339971120717_C001  CS_OFFL_SIR_GOPM_2_2023339971121212_20230997120717_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997120717_C001  CS_OFFL_SIR_GOPM_2_2023339971121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_20230997121232_C001  CS_OFFL_SIR_GOPM_2_202333997121212_C001  CS_O	CS_OFFL_SIR_GOPM_2_20230309T103325_20230309T103844_C001		·
Backscater Outliny, OCOS Alternet Range and Backscater Outliny Flags have been alter Outling Flags have been alternative Flags	CS_OFFL_SIR_GOPM_2_20230309T104016_20230309T104323_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the OCOG Altmeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T113253_20230309T14127 C001  CS_OFFL_SIR_GOPM_2_20230309T14413_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T14413_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T14413_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T121213_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T121213_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T121213_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T121213_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T12133_20230309T120717_C001  CS_OFFL_SIR_GOPM_2_20230309T12133_20230309T121328_C001  CS_OFFL_SIR_GOPM_2_20230309T12133_20230309T121328_C001  CS_OFFL_SIR_GOPM_2_20230309T121318_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T121318_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123486_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123486_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123486_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T123486_C001  CS_OFFL_SIR_GOPM_2_20230309T123486_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T124386_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T13478_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_	CS_OFFL_SIR_GOPM_2_20230309T104522_20230309T104650_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been a Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been a Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range and Backscatter Quality Altimeter Range Quality, OCOG Backscatter Quality Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCO	CS_OFFL_SIR_GOPM_2_20230309T111622_20230309T111858_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, COCG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T12133_20230309T121328_C001  CS_OFFL_SIR_GOPM_2_20230309T121335_20230309T121742_C001  CS_OFFL_SIR_GOPM_2_20230309T121335_20230309T121742_C001  CS_OFFL_SIR_GOPM_2_20230309T121916_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T124346_20230309T1244046_C001  CS_OFFL_SIR_GOPM_2_20230309T124346_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T12430_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T12430_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T12430_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T12430_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135545_C001  CCGR_Altimeter Range Quality, OCOG_Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality set for one or more records  The Ocoan Altimeter Range and Backscatter Quality set for one or more records  The Ocoan Altimeter Range and Backscatter Quality set for one or more records  The Ocoan Altimeter Range and Backscatter Quality set for one or more records  The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter Range and Backscatter Quality Flags have been set for one or more records  The Ocoan Altimeter	CS_OFFL_SIR_GOPM_2_20230309T113253_20230309T114127_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230309T121335_20230309T121742_C001  CS_OFFL_SIR_GOPM_2_20230309T121335_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T121916_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T123436_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T123436_20230309T1234046_C001  CS_OFFL_SIR_GOPM_2_20230309T123436_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_C001  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  CCCOMAItimeter Range Allity Flags have been set for one or more records  CCCOMAITIMETER RANGE All RANGE RANGE AND AND AND AND AND AND AND AND	CS_OFFL_SIR_GOPM_2_20230309T114413_20230309T120717_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230309T121916_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T121916_20230309T123248_C001  CS_OFFL_SIR_GOPM_2_20230309T12436_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124436_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124001_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CCCG_Altimeter Range_Quality, OCOG_Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range_Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range_Altimeter Range_Altimeter Range_Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range_Altimeter Range_Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range_Altimeter Range_Backscat	CS_OFFL_SIR_GOPM_2_20230309T121213_20230309T121328_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T123436_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124430_20230309T124046_C001  CS_OFFL_SIR_GOPM_2_20230309T124430_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T134230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T134230_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  Altimeter Range and Backscatter Quality, OCOG Altimeter Range Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135247_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135545_C001  COCG Altimeter Range Quality, OCOG Backscatter Quality  COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T135545_C001  COCG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records  COCG Altimeter Range	CS_OFFL_SIR_GOPM_2_20230309T121335_20230309T121742_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  CS_OFFL_SIR_GOPM_2_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135247_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001	CS_OFFL_SIR_GOPM_2_20230309T121916_20230309T123248_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135247_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135345_C001  CS_OFFL_SIR_GOPM_2_20230309T1353545_C001  CS_OFFL_SIR_GOPM_2_20230309T1353545_C001  CS_OFFL_SIR_GOPM_2_20230309T1353545_C001  CS_OFFL_SIR_GOPM_2_20230309T1353545_C001  CS_OFFL_SIR_GOPM_2_20230309T135355_20230309T140030_C001  Altimeter Range and Backscatter Quality, OCOG Backscatter Q	CS_OFFL_SIR_GOPM_2_20230309T123436_20230309T124046_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135245_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135835_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001	CS_OFFL_SIR_GOPM_2_20230309T124230_20230309T124710_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135227_C001  Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  Backscatter Quality  CCS_OFFL_SIR_GOPM_2_20230309T135247_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001  CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001	CS_OFFL_SIR_GOPM_2_20230309T131152_20230309T134518_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001  Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPM_2_20230309T134718_20230309T135227_C001		
CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPM_2_20230309T135247_20230309T135545_C001		
	CS_OFFL_SIR_GOPM_2_20230309T135835_20230309T140030_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_GOPM_2_20230309T140328_20230309T143356_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T143552_20230309T143812_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230309T145357_20230309T150736_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T150849_20230309T152438_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T152620_20230309T153126_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been some or more records
CS_OFFL_SIR_GOPM_2_20230309T153205_20230309T153331_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T154101_20230309T155105_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T155724_20230309T160853_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fla and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T163115_20230309T163119_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T163125_20230309T164712_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fla and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T164851_20230309T170338_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fla and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T170537_20230309T171038_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T171801_20230309T173814_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T173816_20230309T174102_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T174225_20230309T175051_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T181117_20230309T181118_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T182003_20230309T184309_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T184620_20230309T184955_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T185018_20230309T185332_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T185559_20230309T192117_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T195600_20230309T202229_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T202403_20230309T202910_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records
CS_OFFL_SIR_GOPM_2_20230309T203525_20230309T211006_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T213252_20230309T213841_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T215553_20230309T220225_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Fland the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T220403_20230309T220944_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records

CS_OFFL_SIR_GOPM_2_20230309T221448_20230309T224852_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T232215_20230309T234155_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230309T234329_20230309T234839_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

### L2 Quality Flags (20 Hz PLRM)

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20230309T000858_20230309T001218_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T003907_20230309T004235_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T021345_20230309T021621_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T022233_20230309T022441_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T034910_20230309T035510_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T035728_20230309T035805_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T044319_20230309T044408_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T044820_20230309T045033_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T045211_20230309T045428_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T051057_20230309T051440_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T054133_20230309T054327_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T060817_20230309T061142_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T062734_20230309T063224_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T071049_20230309T071210_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T074900_20230309T075004_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T090012_20230309T090140_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T103012_20230309T103325_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T103844_20230309T104001_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T110103_20230309T110247_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T111209_20230309T111218_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records

	Ocean Altimeter Pange SSHA SWH	
CS_OFFL_SIR_GOPN_2_20230309T111454_20230309T111622_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T112914_20230309T112948_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T113158_20230309T113202_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T120854_20230309T121213_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T121742_20230309T121907_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T143921_20230309T144018_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T153331_20230309T153544_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T155105_20230309T155211_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T161314_20230309T161615_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T161719_20230309T161933_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T170350_20230309T170537_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T171223_20230309T171715_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T184347_20230309T184620_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T185012_20230309T185017_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T195446_20230309T195600_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T203245_20230309T203416_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T211006_20230309T211205_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T211220_20230309T211345_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T212123_20230309T212148_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T214415_20230309T214455_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T220246_20230309T220403_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T224937_20230309T225100_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T225212_20230309T225230_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230309T234839_20230309T235146_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T000141_20230309T000338_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T011837_20230309T012016_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_GOPR_2_20230309T012232_20230309T012858_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T012858_20230309T013026_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T013033_20230309T013434_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T023118_20230309T023201_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T030151_20230309T030744_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T030744_20230309T030855_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T033119_20230309T033332_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T041110_20230309T041232_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T043632_20230309T043719_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T044235_20230309T044319_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T044443_20230309T044820_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T045033_20230309T045211_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T045748_20230309T045847_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T050833_20230309T050925_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T060636_20230309T060816_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T062103_20230309T062734_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T063308_20230309T063513_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T064000_20230309T064148_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T070950_20230309T071049_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T080047_20230309T080219_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T080243_20230309T080759_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T093044_20230309T093249_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T093611_20230309T093812_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T094012_20230309T094124_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T094148_20230309T094946_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T112022_20230309T112914_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_GOPR_2_20230309T120717_20230309T120854_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T130120_20230309T130841_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T131024_20230309T131051_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T144616_20230309T144736_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T145010_20230309T145017_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T145225_20230309T145357_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T153545_20230309T154101_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T155512_20230309T155724_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T161225_20230309T161314_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T162238_20230309T162619_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T175759_20230309T180319_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T193619_20230309T194626_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T203416_20230309T203525_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T211346_20230309T211826_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPR_2_20230309T211826_20230309T212123_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

### L2 Quality Flags (1 Hz & 1 Hz PLRM)

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

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

Number of products with errors: 212

### **5.8 L2 Ocean Retracking Quality Check**

#### L2 Retracking Flags (20 Hz)

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

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

Number of products with errors: 72

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

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

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

Number of products with errors: 155

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

## 6.1 P2P Product Format Check

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

Number of products with errors:

## 6.2 P2P Product Header Analysis

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

Number of products with errors:

## 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

0

0

### **6.4 P2P Auxiliary Correction Error Check**

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220230308T234841_20230309T003819_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_GOP_220230309T003819_20230309T012756_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T012756_20230309T021734_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T021734_20230309T030711_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T030711_20230309T035649_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220230309T035649_20230309T044626_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T044626_20230309T053603_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220230309T053603_20230309T062540_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T062540_20230309T071518_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T071518_20230309T080455_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T080455_20230309T085433_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220230309T085433_20230309T094410_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T094410_20230309T103348_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T103348_20230309T112325_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T112325_20230309T121303_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T121303_20230309T130239_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220230309T130239_20230309T135217_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T135217_20230309T144154_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T144154_20230309T153132_C001		There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220230309T153132_20230309T162109_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220230309T162109_20230309T171047_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T171047_20230309T180023_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T180023_20230309T185001_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

CS_OFFL_SIR_GOP_220230309T185001_20230309T193938_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T193938_20230309T202916_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220230309T202916_20230309T211853_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T211853_20230309T220831_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T220831_20230309T225808_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T225808_20230309T234746_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230309T234746_20230310T003722_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records

#### 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220230309T062540_20230309T071518_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20 Hz)

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

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors: 3

#### P2P Quality Flags (20 Hz 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: 30

#### P2P Quality Flags (1 Hz & 1 Hz 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: 30

#### 6.8 P2P Ocean Retracking Quality Check

#### P2P Retracking Flags (20 Hz)

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 GOPR and GOPN products over sea ice, but this is to be expected.

Number of products with errors: 28

#### 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 GOPR and GOPN products over sea ice, but this is to be expected.

Number of products with errors: 30

## 7. GOP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_GOPM1B	200	200	7	193	0
SIR_GOPR1B	162	162	0	162	0
SIR_GOPN1B	111	111	2	109	0
SIR_GOPM_2	200	200	136	64	0
SIR_GOPR_2	162	162	77	84	1
SIR_GOPN_2	111	111	39	72	0
SIR_GOP_P2P	29	29	0	28	1

# 7.1 QCC Errors

**Number of QCC reports with errors:** 

2

Total number of occurrences of each error

						0. 00000					
<b>Product Type</b>	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_GOPR_2	1	1	1	1							
<b>Product Type</b>	RLOBOPNCDF	RL	RLOBOPNCDF	RL	•	-	-	-	-	-	-
SIR_GOP_2_	1	1	1	1							
Product Type		RL 1	RLOBOPNCDF 1	RL 1	-	-	-	-	-	-	-

Test Description Key:				
Abbreviation	Test name	Details		
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7		
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7		
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7		
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7		

RNELPOTONCDF

**Product Type** 

219

umber of QCC reports with warnings	2198	
		Total number of occurrences of each warning

RPEPOPFDPLRMSINNCD RPEPOPFDSINNCDF

Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_GOPM1B	193	0	0	0	0	0	0
SIR_GOPM_2	0	0	40	45	0	42	0
SIR_GOPN1B	109	0	0	0	0	0	0
SIR_GOPN_2	0	0	13	25	6	29	32
SIR_GOPR1B	155	0	0	0	0	0	0
SIR_GOPR_2	0	1	19	43	3	25	20

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCE	RPEPOPFDPLRMSINNCDI	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	37	0	33	0	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	17	0	0	0	18	0	29
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	8	2	0	40	0	51	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	27	0	0	9	24	0	7
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	19	12	48	55	29
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	41	0	2	59	35	11

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_GOPM1B	0	0	0	0	0	0	
SIR_GOPM_2	37	0	3	0	0	0	
SIR_GOPN1B	0	0	0	0	46	0	
SIR_GOPN_2	27	28	11	2	0	0	
SIR_GOPR1B	0	0	0	0	162	10	
SIR_GOPR_2	24	40	3	1	0	0	

Pr	roduct Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
S	SIR_GOP_2_	18	28	28	8	29	16	29

SIR_GOP_2_	2	13	27	15	17	29	17
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-

RPEPOPSINNCDF

RSSBCONCDF

RSSHAOFDNCDF

RSSHAOFDPLRMNCDF

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	•	-
SIR_GOP_2_	26	29	17	14	29		

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