

## 1. Overview

Report Production:	02-Mar-2023
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data

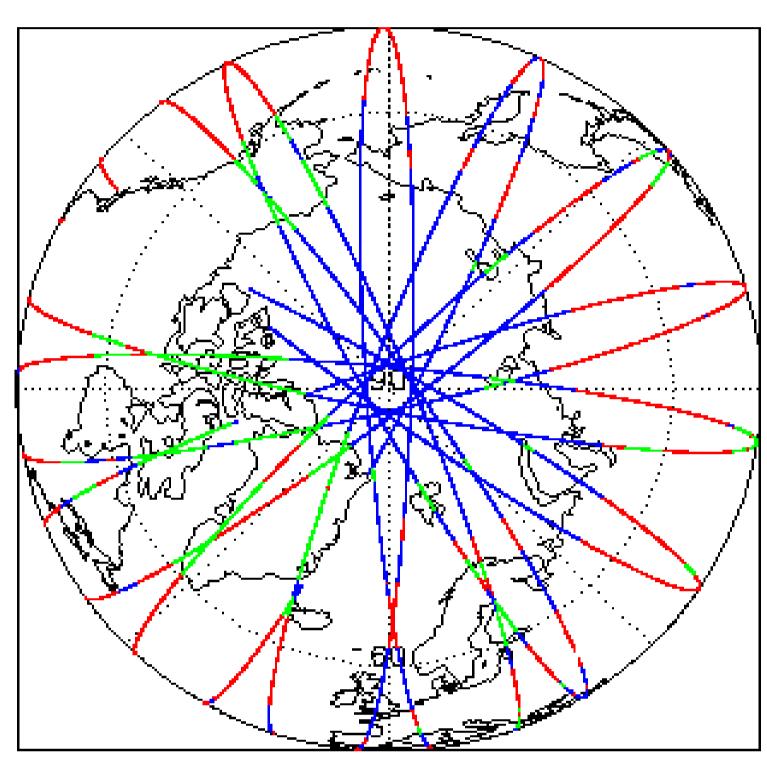
# We would love to hear from you!

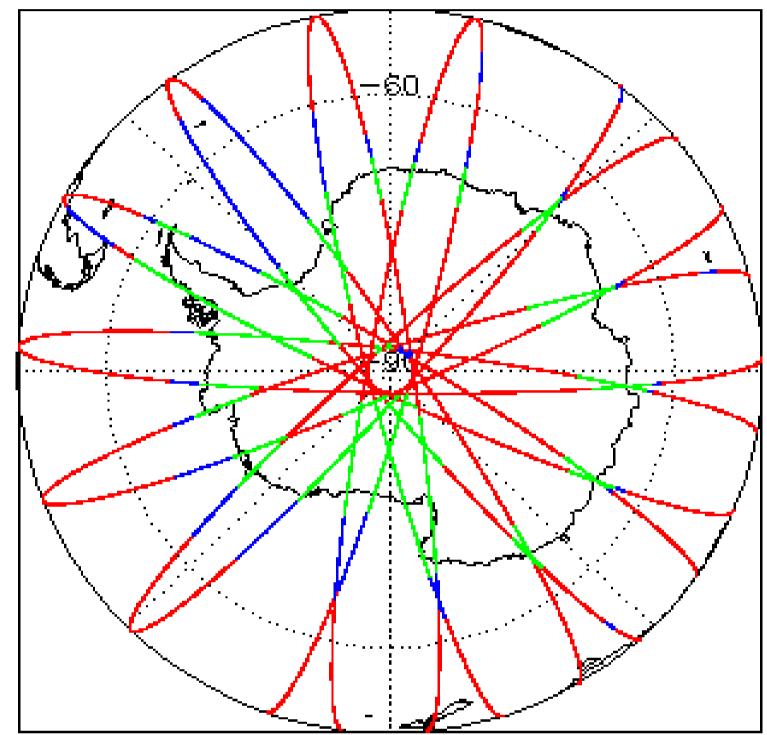
Please let us know your feedback about these daily quality reports: What do you like/ dislike? What quality information do you need? Send your feedback to cs2\_qc\_team@telespazio.com

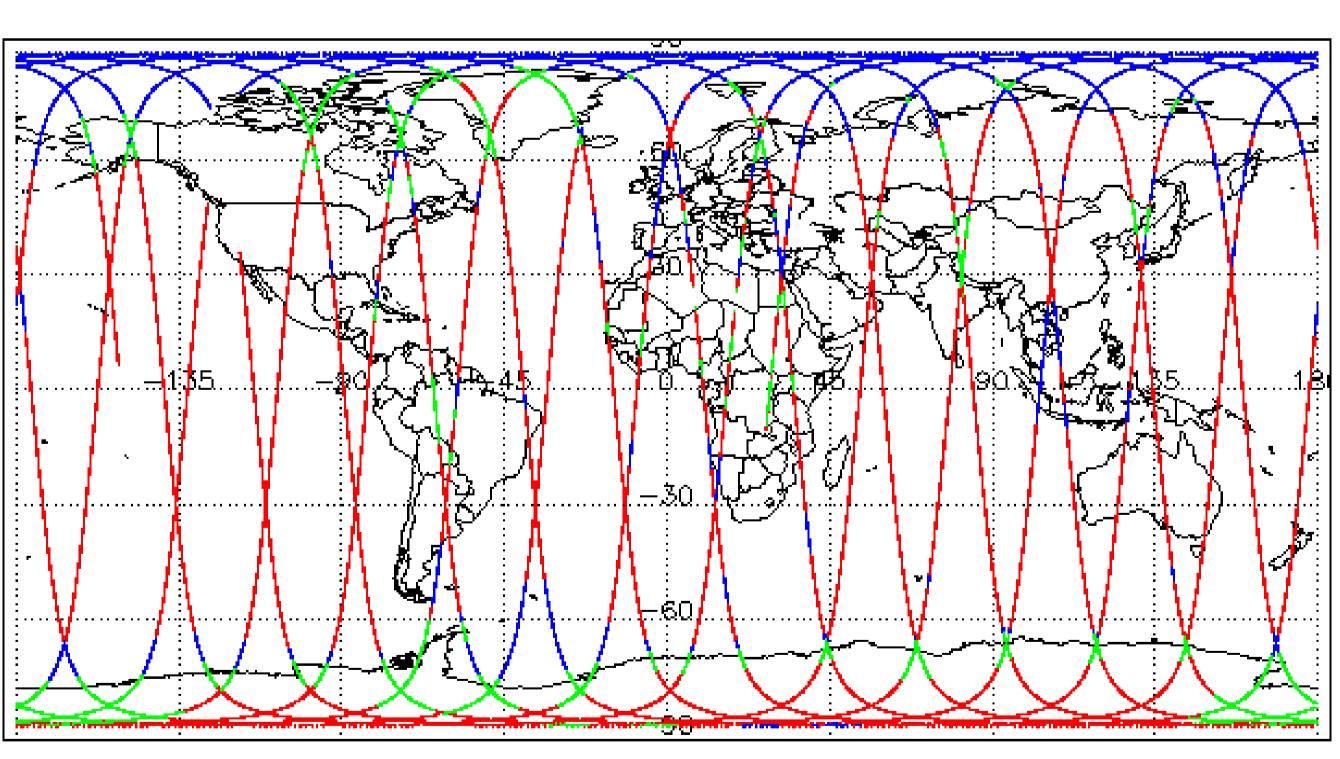
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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, 7.2 and 7.3

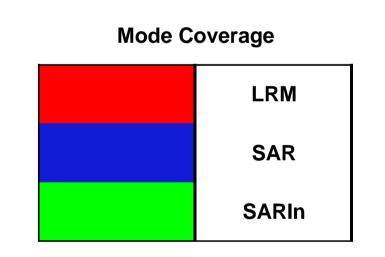
<b>Mission / Instr</b>	ument News
31-Jan-2023	None
01-Feb-2023	None
02-Feb-2023	Nothing planned

# 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.

0

0

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_20230201T003231_20230201T003529_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:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20230201T121705_20230201T124054_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20230201T181048_20230201T182228_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T025618_20230201T025653_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T052659_20230201T052846_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T070151_20230201T070403_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T084110_20230201T084555_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T120451_20230201T120615_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T142051_20230201T142512_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T150907_20230201T150945_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T151025_20230201T151306_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T165247_20230201T165350_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T182716_20230201T183029_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T210704_20230201T210846_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230201T224606_20230201T224746_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: 0

#### **5.2 L2 Product Header Analysis**

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

Number of products with errors: 0

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

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

Number of products with errors: 0

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

For all products, the auxiliary corrections within the Geophysical Group are 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.

	l= u .	
Product  CS_OFFL_SIR_GOPM_2_20230201T044257_20230201T050519_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20230201T143311_20230201T145517_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_20230201T001601_20230201T001745_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20230201T011326_20230201T011630_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_20230201T024642_20230201T024949_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_20230201T025228_20230201T025615_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_20230201T042707_20230201T042941_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_20230201T052219_20230201T052336_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_20230201T060206_20230201T060818_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_20230201T070151_20230201T070403_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_20230201T074429_20230201T074608_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_20230201T084110_20230201T084555_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_20230201T093248_20230201T093523_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_20230201T110349_20230201T110739_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_20230201T114518_20230201T114533_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_20230201T120451_20230201T120615_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_20230201T124332_20230201T124646_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_20230201T125159_20230201T125315_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_20230201T143105_20230201T143221_C001	• • • • • • • • • • • • • • • • • • • •	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20230201T151025_20230201T151306_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_20230201T151317_20230201T151442_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_20230201T165247_20230201T165350_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_20230201T174644_20230201T174913_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_20230201T192551_20230201T192929_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_20230201T200723_20230201T201114_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_20230201T201623_20230201T201659_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_20230201T210704_20230201T210846_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_20230201T001745_20230201T002421_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_20230201T002421_20230201T002721_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_20230201T015406_20230201T015517_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_20230201T015613_20230201T020321_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_20230201T020321_20230201T020527_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_20230201T033741_20230201T034218_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_20230201T034218_20230201T034335_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_20230201T051548_20230201T052055_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_20230201T052055_20230201T052219_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_20230201T065545_20230201T065705_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_20230201T065732_20230201T070151_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_20230201T083315_20230201T083324_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_20230201T083324_20230201T084110_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_20230201T101136_20230201T102146_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_20230201T114408_20230201T114518_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_20230201T115510_20230201T120259_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_20230201T133453_20230201T134546_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_20230201T151443_20230201T152151_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_20230201T165350_20230201T165915_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_20230201T174913_20230201T175142_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20230201T182228_20230201T182335_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_20230201T183251_20230201T183948_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_20230201T185328_20230201T190143_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_20230201T201115_20230201T201623_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_20230201T214838_20230201T215646_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_20230201T232723_20230201T233455_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_20230201T233803_20230201T234031_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_20230201T234408_20230201T234555_C001	liviean Dynamic Tobodraphy (1)	There is an error with the Mean Dynamic Topography (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_20230201T003231_20230201T003529_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_20230131T234023_20230201T001345_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_20230201T005531_20230201T010604_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_20230201T011908_20230201T014140_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_20230201T014425_20230201T015406_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_20230201T020720_20230201T020945_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_20230201T021745_20230201T021800_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_20230201T021804_20230201T022227_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_20230201T022431_20230201T023034_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_20230201T023221_20230201T024345_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_20230201T024949_20230201T025228_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_20230201T025903_20230201T032908_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_20230201T033016_20230201T033148_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_20230201T034832_20230201T035535_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_20230201T035550_20230201T042005_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_20230201T043345_20230201T043639_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_20230201T043803_20230201T044212_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_20230201T044257_20230201T050519_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_20230201T050533_20230201T050706_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_20230201T052846_20230201T053053_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_20230201T053205_20230201T054444_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_20230201T060052_20230201T060206_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_20230201T060818_20230201T061056_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_20230201T061115_20230201T061543_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_20230201T061746_20230201T063229_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_20230201T063409_20230201T063652_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_20230201T064935_20230201T065545_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_20230201T071101_20230201T071651_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_20230201T071934_20230201T074336_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_20230201T074608_20230201T075454_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_20230201T075712_20230201T082110_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_20230201T084810_20230201T092206_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_20230201T092825_20230201T093247_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_20230201T093546_20230201T100211_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_20230201T102942_20230201T110110_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_20230201T110739_20230201T111327_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_20230201T111507_20230201T112113_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_20230201T120615_20230201T121656_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_20230201T121705_20230201T124054_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_20230201T124646_20230201T125159_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_20230201T125356_20230201T125646_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_20230201T125835_20230201T130626_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_20230201T130839_20230201T131305_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_20230201T134546_20230201T135455_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_20230201T135740_20230201T141932_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_20230201T142512_20230201T142647_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_20230201T142654_20230201T143105_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_20230201T143311_20230201T145517_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_20230201T145606_20230201T150032_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_20230201T150402_20230201T150821_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_20230201T150821_20230201T150907_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_20230201T152711_20230201T153023_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_20230201T153202_20230201T155859_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

### CONTRIBUTIONS OF A CONTRIBUTION OF A CONTRIB	CS_OFFL_SIR_GOPM_2_20230201T160606_20230201T160830_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
Common   C	CS_OFFL_SIR_GOPM_2_20230201T161651_20230201T162920_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Solution (Control College Coll	CS_OFFL_SIR_GOPM_2_20230201T163010_20230201T164716_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_CPPL_SR_SOPNL2_ADDICOT_TRIGN_DOSCOT_TRIGN_COOL  Interest Notice or the disconnection Charles, 1920.  CR_CPPL_SR_SOPNL2_ADDICOT_TRIGN_DOSCOT_TRIGN_COOL  CR_CPPL_SR_SOPNL2_ADDICOT_TRIGN_COOL  CR_CPPL_SR_SOPNL2_ADDICOT_TRIGN_DOSCOT_TRIGN_COOL  CR_CPPL_SR_SOPNL2_ADDICOT_TRIGN_DOSCOT_TRIGN_COOL  CR_CPPL_SR_SOPNL2_ADDICOT_TRIGN_COOL  CR_CPPL_SR_SOPNL2_ADDI	CS_OFFL_SIR_GOPM_2_20230201T170401_20230201T170406_C001		
SS DIFF. SIR. COPM. 2. 2022/2011/1949. 2000/2011774/45. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/2011774/45. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/2011774/45. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/201174/2007. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/201174/2007. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/201174/2007. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. 2000/201174/2007. C021  CS. DIFF. SIR. COPM. 2. 2022/201171949. C020/2	CS_OFFL_SIR_GOPM_2_20230201T171049_20230201T172017_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Section County   Sectio	CS_OFFL_SIR_GOPM_2_20230201T172220_20230201T173750_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFF_SR_OCPAL_2202001119046_2202001119046_2202001119046_200010119046	CS_OFFL_SIR_GOPM_2_20230201T173949_20230201T174445_C001		, ,
CS_OFF_SIR_GOPV_2_20200011194991_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194991_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119490_CODI  SOFF_SIR_GOPV_2_202000011194911_2020201119290_CODI  SOCIO_ATTRICE Range Outling_CODI  SOCIO_ATTRICE Range Outling_COD	CS_OFFL_SIR_GOPM_2_20230201T175342_20230201T180607_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Boccastate Cuality  CS OFFL SIR GOPY 2 2220001719140 2020221719464 0001  CS OFFL SIR GOPY 2 2220001719197 2020221719240 0001  CS OFFL SIR GOPY 2 2220001719249 2020201719240 0001  CS OFFL SIR GOPY 2 2220001719249 2020201719240 0001  CS OFFL SIR GOPY 2 2220001719249 202020171927 0001  CS OFFL SIR GOPY 2 2220001719240 20020171927 0001  CS OFFL SIR GOPY 2 2220001719240 20020171927 0001  CS OFFL SIR GOPY 2 2220001719280 20020171927 0001  CS OFFL SIR GOPY 2 2220001719280 20020171927 0001  CS OFFL SIR GOPY 2 2220001720320 200201720520 0001  CS OFFL SIR GOPY 2 2220001720320 200201720500 0001  CS OFFL SIR GOPY 2 2220001720320 200201720500 0001  CS OFFL SIR GOPY 2 2220001720320 200201720500 0001  CS OFFL SIR GOPY 2 2220001720320 0001  CS OFFL SIR GOPY 2 2220001720320 0001  CS OFFL SIR GOPY 2 2220001720300 0	CS_OFFL_SIR_GOPM_2_20230201T181048_20230201T182228_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Bookscarter Quality, COOD Altereder Rungs and Bookscarter Quality COOD Sedecater Quality Sedecate	CS_OFFL_SIR_GOPM_2_20230201T184510_20230201T184527_C001		, ,
Beckscatter Quality for one or more records  CS_OFFL_SIR_COPML_2_202302011192438_202302011192551_C001  CS_OFFL_SIR_COPML_2_202302011192438_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193038_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193038_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193038_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193038_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193038_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_202302011195302_C001  CS_OFFL_SIR_COPML_2_202302011193338_20230201120502_C001  CS_OFFL_SIR_COPML_2_202302011193338_20230201120502_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_202302011205032_202302011205045_C001  CS_OFFL_SIR_COPML_2_20230201120505_20230201120505_C001  CS_OFFL_SIR_COPML_2_202302011223034_C001  CS_OFFL_SIR_COPML_2_202302011223034_202312211223502_C001  CS_OFFL_SIR_COPML_2_20230201122305_202302011223505_C001  CS_OFFL_SIR_COPML_2_20230201122305_202302011223505_C001  CS_OFFL_SIR_COPML_2_20230201122305_202302011223505_C001  CC_OCM_Altimeter Range_Quality, OCOG_Altimeter Range_and Backscatter Quality Flags have been set to run or more records  CC_OCM_Altimeter Range_Quality, OCOG_Altimeter Range_and Backscatter Quality Flags have been set to run or more records  CC_OCM_Altimeter Range_Quality, OCOG_Altimeter Range_and Backscatter Quality Flags have been set to run or more records  CC_OCM_Altimeter Range_Quality, OCOG_Altimeter Range_and Backscatter Quality Flags have been se	CS_OFFL_SIR_GOPM_2_20230201T190143_20230201T191648_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230201T192013_20230201T195302_C001  CS_OFFL_SIR_GOPM_2_20230201T195333_20230201T195302_C001  CS_OFFL_SIR_GOPM_2_20230201T195333_20230201T195721_C001  CS_OFFL_SIR_GOPM_2_20230201T20512_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T20512_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T20512_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T20522_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T205303_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205202_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205204_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205204_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205045_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205045_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205045_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T205045_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T205203_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T210023_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T210023_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T210023_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T210023_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T210023_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T220503_20230201T2130314_C001  CS_OFFL_SIR_GOPM_2_20230201T220503_20230201T223052_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T223052_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T223052_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T223052_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T223052_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T223053_C001  CS_OFFL_SIR_GOPM_2_20230201T223053_20230201T233050_C00301T23050_C0030	CS_OFFL_SIR_GOPM_2_20230201T191917_20230201T192400_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and become the COGO Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201720593_202302017213501_C001  CS_OFFL_SIR_GOPM_2_20230201720593_202302017213501_C001  CS_OFFL_SIR_GOPM_2_20230201720593_202302017213501_C001  CS_OFFL_SIR_GOPM_2_20230201720593_202302017213501_C001  CS_OFFL_SIR_GOPM_2_202302017221003_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722303_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722303_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722373_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722373_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722373_202302017223552_C001  CS_OFFL_SIR_GOPM_2_20230201722373_20230201723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C001723423_C00172343_C00	CS_OFFL_SIR_GOPM_2_20230201T192438_20230201T192551_C001		
on Backscatter Quality. COCD Altimeter Range and Backscatter Quality. COCD Altimeter Range and Backscatter Quality. CocD CS. OFFL_SIR_GOPM_2_20230201T205202_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205202_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T2052645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001  CS. OFFL_SIR_GOPM_2_20230201T205252_20230201T213801 C001  CS. OFFL_SIR_GOPM_2_20230201T210029_20230201T213801 C001  CS. OFFL_SIR_GOPM_2_20230201T210029_20230201T213801 C001  CS. OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS. OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS. OFFL_SIR_GOPM_2_20230201T222030201T224228_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T223413_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T234802_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T224505_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T224505_C001  CS. OFFL_SIR_GOPM_2_20230201T224237_20230201T224505_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  CS. OFFL_SIR_GOPM_2_20230201T225005_20230201T23443_C001  COCGA Altimeter Range Quality, CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS. OFFL_SIR_GOPM_2_20230201T235505_20230201T233431_C001  CS. OFFL_SIR_GOPM_2_20230201T235505_20230201T235431_C001  CS. OFFL_SIR_GOPM_2_20230201T20554	CS_OFFL_SIR_GOPM_2_20230201T193013_20230201T195302_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the COCO Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags and the COCO Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality Flags have been and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T205936_20230201T210314_C001  CS_OFFL_SIR_GOPM_2_20230201T210929_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T210929_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T2232413_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233413_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233411_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233411_C001  CS_OFFL_SIR_GOPM_2_20230201T2335130_20230201T233431_C001  CS_OFFL_SIR_GOPM_2_20230201T2335130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235530_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235530_20230201T23	CS_OFFL_SIR_GOPM_2_20230201T195338_20230201T195721_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 altimeter Range Quality, COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T205936_20230201T210314_C001  CS_OFFL_SIR_GOPM_2_20230201T210529_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T210529_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T21003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T227374_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T2243350_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T233850_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233500_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235430_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235430_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_202	CS_OFFL_SIR_GOPM_2_20230201T203112_20230201T205202_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230201T210929_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T210929_20230201T213801_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224228_C001  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224228_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224228_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T23413_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CCCG_Altimeter Range Quality, OCOG_Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altimeter Range Altimeter Range	CS_OFFL_SIR_GOPM_2_20230201T205252_20230201T205645_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T223734 20230201T223552_C001  CS_OFFL_SIR_GOPM_2_20230201T223734 20230201T224229 C001  CS_OFFL_SIR_GOPM_2_20230201T223734 20230201T224229 C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224229 C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224205_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T233413_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T235130 20230201T235431 C001  CCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20230201T205936_20230201T210314_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224229_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T035130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T035130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T035130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T035130_20230201T0355030000000000000000000000000000000	CS_OFFL_SIR_GOPM_2_20230201T210929_20230201T213801_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  DCGG Altimeter Range Quality, OCOG Backscatter Quality  CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001  DCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001  DCGA 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  DCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  DCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  DCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records  DCGA Altimeter Range Quality, OCOG Backscatter Quality  DCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records  DCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20230201T221003_20230201T223552_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  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  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG 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  OCOG Altimeter Range Quality, OCOG 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  OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20230201T223734_20230201T224229_C001		l
CS_OFFL_SIR_GOPM_2_20230201T232413_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001  CS_OFFL_SIR_GOPM_2_20230201T001348_20230201T001505_C001  CS_OFFL_SIR_GOPM_2_20230201T001348_20230201T001505_C001  CS_OFFL_SIR_GOPM_2_20230201T001348_20230201T001505_C001  CS_OFFL_SIR_GOPM_2_20230201T001348_20230201T001505_C001  CS_OFFL_SIR_GOPM_2_20230201T001348_20230201T001505_C001	CS_OFFL_SIR_GOPM_2_20230201T224237_20230201T224605_C001		
CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Set SIR_GOPM_2_20230201T235130_20230201T235431_C001  and Backscatter Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backsc	CS_OFFL_SIR_GOPM_2_20230201T225005_20230201T232413_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_202302011235130_202302011235431_C001  Backscatter Quality  For one or more records  OCOG Altimeter Range Quality, OCOG  The OCOG Altimeter Range and Backscatter Quality Flags have been set	CS_OFFL_SIR_GOPM_2_20230201T233650_20230201T233802_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
US OFFI SIR GOPN / /0/30/011001348 /0/30/011001505 U001	CS_OFFL_SIR_GOPM_2_20230201T235130_20230201T235431_C001		, ,
	CS_OFFL_SIR_GOPN_2_20230201T001348_20230201T001505_C001		

CS_OFFL_SIR_GOPN_2_20230201T024642_20230201T024949_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_GOPN_2_20230201T025618_20230201T025653_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_GOPN_2_20230201T042707_20230201T042941_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.

91

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20230201T001601_20230201T001745_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_20230201T004354_20230201T004538_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_20230201T004812_20230201T004902_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_20230201T010646_20230201T010812_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_20230201T011326_20230201T011630_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_20230201T022227_20230201T022431_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_20230201T024642_20230201T024949_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_20230201T025228_20230201T025615_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_20230201T025658_20230201T025731_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_20230201T042707_20230201T042941_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_20230201T043137_20230201T043345_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_20230201T050706_20230201T050933_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_20230201T054957_20230201T055041_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_20230201T060206_20230201T060818_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_20230201T061543_20230201T061724_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_20230201T070151_20230201T070403_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_20230201T070456_20230201T070724_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_20230201T084110_20230201T084555_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_20230201T084648_20230201T084810_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_20230201T092713_20230201T092825_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_20230201T093248_20230201T093523_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_20230201T110349_20230201T110739_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_20230201T113249_20230201T113349_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_20230201T113846_20230201T113951_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_20230201T114931_20230201T115055_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_20230201T115159_20230201T115236_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_20230201T124332_20230201T124646_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_20230201T125159_20230201T125315_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_20230201T131305_20230201T131408_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_20230201T142051_20230201T142512_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_20230201T143105_20230201T143221_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_20230201T151025_20230201T151306_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_20230201T151317_20230201T151442_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_20230201T164716_20230201T165122_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_20230201T170708_20230201T170851_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_20230201T174644_20230201T174913_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_20230201T180607_20230201T180635_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_20230201T180647_20230201T181048_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_20230201T182343_20230201T182507_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_20230201T200504_20230201T200628_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_20230201T200723_20230201T201114_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_20230201T202607_20230201T202739_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_20230201T202837_20230201T203112_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_20230201T205706_20230201T205936_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_20230201T210704_20230201T210846_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_20230201T220507_20230201T220613_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_20230201T223607_20230201T223734_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_20230201T232609_20230201T232723_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_20230201T235845_20230201T235942_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_20230201T003120_20230201T003231_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_20230201T015406_20230201T015517_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_20230201T015613_20230201T020321_C001	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_20230201T020321_20230201T020527_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_20230201T020946_20230201T021351_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_20230201T021656_20230201T021727_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_20230201T033148_20230201T033341_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_20230201T033602_20230201T033725_C001	Intimator Pando and Rackecattor i illality	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_20230201T033741_20230201T034218_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_20230201T034717_20230201T034806_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_20230201T035536_20230201T035550_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_20230201T042006_20230201T042707_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_20230201T051548_20230201T052055_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_20230201T055629_20230201T060052_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_20230201T063230_20230201T063409_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_20230201T063652_20230201T063956_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_20230201T065545_20230201T065705_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_20230201T065732_20230201T070151_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_20230201T070403_20230201T070456_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_20230201T070838_20230201T070938_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_20230201T071651_20230201T071812_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_20230201T083324_20230201T084110_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_20230201T115510_20230201T120259_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_20230201T130626_20230201T130839_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_20230201T133145_20230201T133435_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_20230201T133453_20230201T134546_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_20230201T141932_20230201T142051_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_20230201T151443_20230201T152151_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_20230201T161017_20230201T161651_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_20230201T165350_20230201T165915_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_20230201T174913_20230201T175142_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_20230201T182228_20230201T182335_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_20230201T183251_20230201T183948_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_20230201T185328_20230201T190143_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_20230201T195721_20230201T195824_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_20230201T201659_20230201T201842_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_20230201T214838_20230201T215646_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_20230201T224746_20230201T225005_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: 195

#### **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: 62

#### 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: 143

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

## 6.1 P2P Product Format Check

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

Number of products with errors: 0

# 6.2 P2P Product Header Analysis

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

Number of products with errors:

## 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:

30

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220230131T233316_20230201T002255_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	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_220230201T002255_20230201T011231_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_220230201T011231_20230201T020210_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_220230201T020210_20230201T025146_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_220230201T025146_20230201T034125_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_220230201T034125_20230201T043100_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_220230201T043100_20230201T052039_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_220230201T052039_20230201T061015_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_220230201T061015_20230201T065954_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_220230201T065954_20230201T074930_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_220230201T074930_20230201T083909_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_220230201T083909_20230201T092845_C001	Topography (1), Total Geocentric Ocean	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_220230201T092845_20230201T101823_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_220230201T101823_20230201T110759_C001	THOE (FES) NON-EQUIIDAUM LONG PERIOD	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_220230201T110759_20230201T115738_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_220230201T115738_20230201T124714_C001		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_220230201T124714_20230201T133653_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_220230201T133653_20230201T142629_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_220230201T142629_20230201T151607_C001	Tide (GOT), Total Geocentric Ocean  Tide (FFS), Non-Equilibrium Long Period	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_220230201T151607_20230201T160543_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_220230201T160543_20230201T165522_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_220230201T165522_20230201T174458_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_220230201T174458_20230201T183437_C001		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_220230201T183437_20230201T192413_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_220230201T192413_20230201T201352_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_220230201T201352_20230201T210327_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_220230201T210327_20230201T215306_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_220230201T215306_20230201T224242_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_220230201T224242_20230201T233221_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_220230201T233221_20230202T002157_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### **6.5 P2P Measurement Confidence Data Check**

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

Number of products with errors:

Product	Test Failed	Description		
CS_OFFL_SIR_GOP_220230201T002255_20230201T011231_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: 30

#### 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: 29

#### 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	192	192	4	188	0
SIR_GOPR1B	162	162	0	162	0
SIR_GOPN1B	109	109	2	107	0
SIR_GOPM_2	192	192	139	53	0
SIR_GOPR_2	162	162	85	76	1
SIR_GOPN_2	109	109	45	64	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

Product Type	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							

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				

Number of QCC reports with warnings

1960

Total number of occurrences of each warning

Prod	duct Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_	_GOPM1B	188	0	0	0	0	0	0
SIR_	_GOPM_2	0	0	38	39	0	41	0
SIR_	_GOPN1B	105	0	0	0	0	0	0
SIR_	_GOPN_2	0	0	10	33	5	19	26
SIR_	_GOPR1B	158	0	0	0	0	0	0
SIR_	_GOPR_2	0	1	24	38	2	24	23

Product Type	RBSZOPOEPNCDF	RLPTONCDF	RMSSGHOPONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCDI
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	35	0	1	0	29	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	16	7	0	2	0	0	13
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	14	7	0	5	0	35	0

Product Type	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	0	24	0	0	6	28
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	32	0	0	23	12	45
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	44	0	0	32	0	2	59

Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	7	34	0	4	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	53	32	24	25	7	0	1
SIR_GOPR1B	0	0	0	0	0	1	0
SIR_GOPR_2	32	16	26	35	3	0	4

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_GOP_2_	13	28	29	6	29	16	29

Product Type	RLPTONCDF	RMSSGHOPONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCDI	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF
SIR_GOP_2_	18	1	6	14	26	19	16
		•					

<b>Product Type</b>	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF
SIR_GOP_2_	29	18	27	29	16	13	29

Test Description Key:		
•	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
RLPTONCDF	RangeLongPeriodTideOceanNetCDF	The Long period tide height should be between -50mm and 50mm (or missing) for surface type = ocean
RMSSGHOPONCDF	RangeMSSGeoidHeightOPOceanNetCDF	The MSS/geoid height should be between -106000mm and 88000mm (or missing) for surface type = ocean - NetCDF
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
	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
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

L1B and L2 Product name n/a

P2P Product name

CS\_OFFL\_SIR\_GOP\_2\_\_20230201T233221\_20230202T002157\_C002