

1. Overview

Report Production:	20-Apr-2023
Processor Used:	CryoSat Ocean Processor
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data

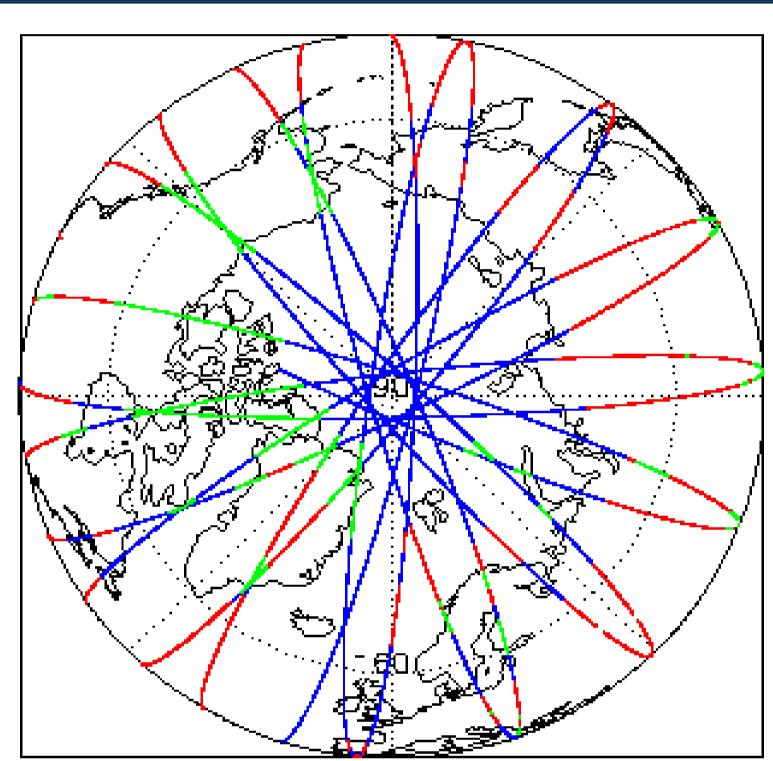
We would love to hear from you!
Please let us know your feedback about these daily
quality reports: What do you like/ dislike? What quality
information do you need? Send your feedback to

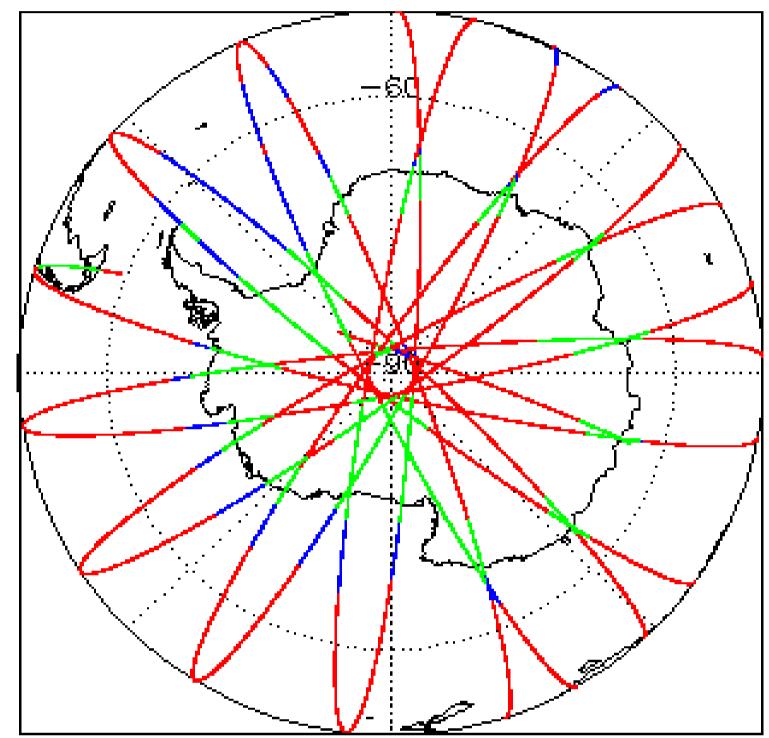
cs2_qc_team@telespazio.com

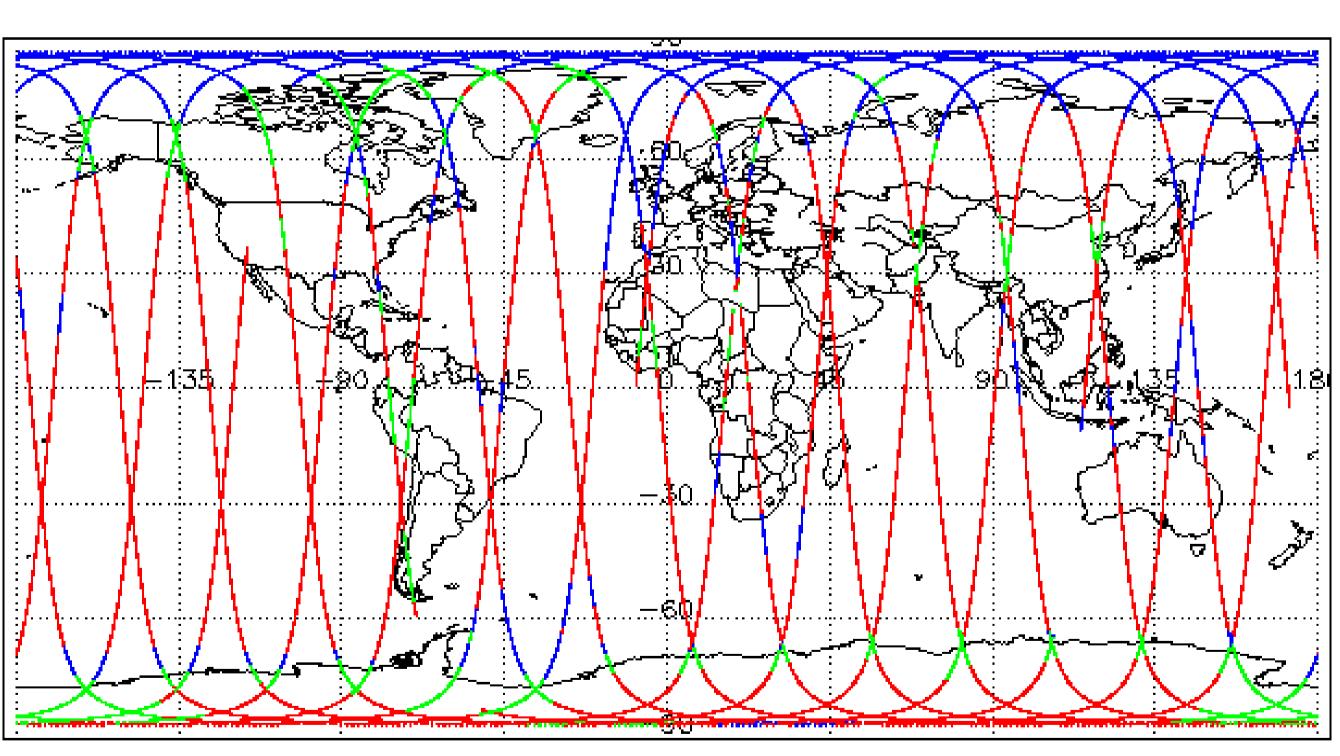
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1, 7.2 and 7.3

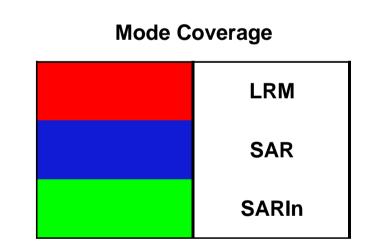
Mission / Instrument News		
21-Mar-2023	None	
22-Mar-2023	None	
23-Mar-2023	Nothing planned	

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. GOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The l1b_proc_flag_hr flag is currently set all L1B GOPR and GOPN products because the l1b_processing_quality_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.

Number of products with errors:

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

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_20230322T023136_20230322T024558_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20230322T203142_20230322T205025_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:

17

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20230322T030210_20230322T031542_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20230322T163424_20230322T163907_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20230322T203142_20230322T205025_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T021058_20230322T021216_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T075826_20230322T075949_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T151526_20230322T151742_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T165105_20230322T165617_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T193051_20230322T193213_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T200708_20230322T201134_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20230322T201917_20230322T201953_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230322T035523_20230322T035726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230322T101808_20230322T102646_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230322T134803_20230322T135307_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20230322T143347_20230322T143952_C001	Loss of Echo	The tracking echo is missing for one or more records

5. GOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors:

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

5.4 L2 Auxiliary Correction Error Check

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

0

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.

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20230322T011149_20230322T011426_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_20230322T011620_20230322T012203_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_20230322T020706_20230322T020826_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_20230322T025012_20230322T025325_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_20230322T034617_20230322T034724_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_20230322T042922_20230322T043123_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_20230322T052532_20230322T053119_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_20230322T060855_20230322T061013_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_20230322T074816_20230322T074936_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_20230322T092805_20230322T093131_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_20230322T101435_20230322T101522_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_20230322T102646_20230322T102916_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_20230322T110711_20230322T111031_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_20230322T111549_20230322T111712_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_20230322T115654_20230322T115923_C001		There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the 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_20230322T125441_20230322T125557_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_20230322T133722_20230322T133827_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_20230322T143147_20230322T143347_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_20230322T151526_20230322T151742_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_20230322T165105_20230322T165617_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_20230322T175100_20230322T175321_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_20230322T182901_20230322T183440_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_20230322T192033_20230322T192157_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_20230322T200708_20230322T201134_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20230322T210035_20230322T210159_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_20230322T210957_20230322T211109_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_20230322T214914_20230322T215101_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_20230322T224007_20230322T224133_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_20230322T224647_20230322T224950_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_20230322T001956_20230322T002705_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_20230322T002706_20230322T004207_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_20230322T015950_20230322T020557_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_20230322T020557_20230322T020705_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_20230322T024822_20230322T025011_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_20230322T033935_20230322T034346_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_20230322T034346_20230322T034617_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_20230322T052002_20230322T052531_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_20230322T070048_20230322T070549_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_20230322T083803_20230322T084750_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_20230322T101808_20230322T102646_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_20230322T115924_20230322T120649_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_20230322T133827_20230322T134531_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_20230322T151742_20230322T152432_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_20230322T165617_20230322T170238_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_20230322T183441_20230322T183518_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_20230322T183518_20230322T184418_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_20230322T201134_20230322T201917_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_20230322T215101_20230322T215739_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_20230322T215739_20230322T220032_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_20230322T232923_20230322T233638_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_20230322T233639_20230322T233852_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_20230322T234237_20230322T234833_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) 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_20230322T023136_20230322T024558_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20230322T203142_20230322T205025_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.

2

Number of products with errors: 84

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20230321T234226_20230322T001643_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_20230322T004207_20230322T010450_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_20230322T012301_20230322T013210_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_20230322T013212_20230322T013540_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_20230322T013702_20230322T013754_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_20230322T013848_20230322T014040_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 beer set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T014521_20230322T015331_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 beer set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T021240_20230322T022941_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 beer set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T023136_20230322T024558_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 OFFE SIR GOPM 2 202303221025325 202303221025531 COO1	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_20230322T025627_20230322T030033_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been see for one or more records
CS_OFFL_SIR_GOPM_2_20230322T030210_20230322T031542_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 bee set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T031948_20230322T032910_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
LS CIEEL SIR (=CIEN/L) / /01/303///10335/5 /01/303///1033935 C.001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been so for one or more records
CS_OFFL_SIR_GOPM_2_20230322T034724_20230322T034816_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230322T035727_20230322T040837_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_20230322T041407_20230322T042850_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
L.S. CIEEL SIR (3CIPIN) / /0/303//10431/4 /0/303//1043936 C.001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230322T044129_20230322T045748_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T054035_20230322T060741_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T061255_20230322T061812_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230322T062047_20230322T064604_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T071736_20230322T074627_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
U.S UPEL SIR GUPIVLA 202303221075222 202303221075826 CUUT	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230322T075950_20230322T082742_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T083627_20230322T083803_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20230322T085137_20230322T092604_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
1.5 DEEL SIR (3DPN/L) / /11/303//1003/31 /11/303//1003658 L1001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records
CS_OFFL_SIR_GOPM_2_20230322T093826_20230322T094449_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS OFFE SIR GOPM 7 707303771100844 707303771101000 C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been s for one or more records

Common Force Comm	CS_OFFL_SIR_GOPM_2_20230322T101541_20230322T101808_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
Description of the company of the	CS_OFFL_SIR_GOPM_2_20230322T103108_20230322T103934_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_CFF_SR_COM2_020020FF1140_202020FF1150_COM	CS_OFFL_SIR_GOPM_2_20230322T104218_20230322T110526_C001	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
25. OFF. 58 COTO 2 23000071103 AGSEZZITIONS COST COTO 158 COTO 2 230000711103 AGSEZZITIONS COST COTO 2 2300071103 AGSEZZITIONS COST COTO 2 2300071103 AGSEZZITIONS	CS_OFFL_SIR_GOPM_2_20230322T111032_20230322T111136_C001	OCOG Altimeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Quality Flags have been set
Once of the part			
Martine Recrysia of Biologophics Control (2014) Page		Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
Histories Range and Relocated Quality sect of the coord of the coo	CS_OFFL_SIR_GOPM_2_202303221111726_202303221113726_C001	Altimeter Range and Backscatter Quality	set for one or more records
Comparison Com	CS_OFFL_SIR_GOPM_2_20230322T120942_20230322T124317_C001	Altimeter Range and Backscatter Quality	set for one or more records
CE_OFF_SIR_GOPV_2_20200227119392_2020227119293_COD Almenter Range Obasiny, OCOS Almenter Range and Backwatter Quality Plags have been sed corn or on over secrits CE_OFF_SIR_GOPV_2_2020027119390_2020227119293_COD CE_OFF_SIR_GOPV_2_20200227119390_202027119293_COD CE_OFF_SIR_GOPV_2_20200227119390_202022719293_COD CE_OFF_SIR_GOPV_2_20200227119390_202022719293_COD CE_OFF_SIR_GOPV_2_20200227119390_202022719293_COD CE_OFF_SIR_GOPV_2_20200227119390_COD CE_OFF_SIR_GOPV_2_20200027119390_COD CE_OFF_SIR_GOPV_2_2020002711939	CS_OFFL_SIR_GOPM_2_20230322T124559_20230322T125035_C001	Backscatter Quality	for one or more records
South List. ColPM _2_20230227119396_20230227119018_CO1 CS_OFFL_SIR_COPM _2_20230227119396_20230227119018_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119098_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_20230227119098_20230227119090_CO1 CS_OFFL_SIR_COPM _2_2023022711909_2023022711909_CO1 CS_OFFL_SIR_COPM _2_2023022711909_2023022711909_CO1 CS_OFFL_SIR_COPM _2_2023022711909_2023022711909_CO1 CS_OFFL_SIR_COPM	CS_OFFL_SIR_GOPM_2_20230322T130137_20230322T133259_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Excision County (2003) and Excision County (CS_OFFL_SIR_GOPM_2_20230322T133439_20230322T133721_C001	•	
and Backscatter Quality, COCG Artimeter Range Quality, QCCG CS_OFFL_SIR_GOPM_2_20230322T142914_20230322T142934_COCI CS_OFFL_SIR_GOPM_2_20230322T142914_20230322T142934_COCI CS_OFFL_SIR_GOPM_2_20230322T142924_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142928_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T142934_2023032T142934_COCI CS_OFFL_SIR_GOPM_2_2023032T14293_2023032T142934_COCI CS_OFFL_SIR_	CS_OFFL_SIR_GOPM_2_20230322T135308_20230322T140013_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230322T14992_2023032ZT149314_C001 CS_OFFL_SIR_GOPM_2_2023032ZT14992_2023032ZT149314_C001 CS_OFFL_SIR_GOPM_2_2023032ZT14992_2023032ZT149314_C001 CS_OFFL_SIR_GOPM_2_2023032ZT14992_2023032ZT149314_C001 CS_OFFL_SIR_GOPM_2_2023032ZT14992_2023032ZT149314_C001 CS_OFFL_SIR_GOPM_2_2023032ZT149722_2023032ZT149730_C001 CS_OFFL_SIR_GOPM_2_2023032ZT149722_2023032ZT159730_C001 CS_OFFL_SIR_GOPM_2_2023032ZT149722_2023032ZT159730_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189242_2023032ZT169730_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189242_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189244_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT169840_C001 CS_OFFL_SIR_GOPM_2_2023032ZT189444_2023032ZT18980_C001 CS_OFFL_SIR_GOPM_2_2023032ZT17890_C001 CS_OFFL_SIR_GOPM_2_2023032ZT17890_C001 CS_OFFL_SIR_GOPM_2_2023032ZT17890_C00303ZZT17890_C001 CS_OFFL_SIR_GOPM_2_2023032ZT17890_C001 CO_OSS_ANIMATE Range_SIR_SIR_SIR_SIR_SIR_SIR_SIR_SIR	CS_OFFL_SIR_GOPM_2_20230322T140803_20230322T142240_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscater Quality COCG Altmeter Range and Backscater Quality Flags have been at the OCGG Altmeter Range and Backscater Quality Flags have been at the OCGG Altmeter Range and Backscater Quality Flags have been at the OCGG Altmeter Range and Backscater Quality Flags and the OCGG Altmeter Range and Backscater Quality Flags and the OCGG Altmeter Range and Backscater Quality Flags and the OCGG Altmeter Range and Backscater Quality Flags have been at the Ocean Altmeter Range and Backscater Quality Flags and the OCGG Altmeter Range and Backscater Quality Flags and the OCGG Altmeter Range and Backscater Quality Flags have been at the Ocean Altmeter Range and Backscater Quality Flags have been at the Ocean Altmeter Range and Backscater Quality Flags have been at the Ocean Altmeter Range and Backscater Quality Flags have been at for one or more records CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T180485_C001 CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T180485_C001 CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T18046_C001 CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T18046_C001 CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T18046_C001 CS_OFFL_SIR_GOPM_2_20230322T180344_20230322T1804788_C001 CS_OFFL_SIR_GOPM_2_20230322T1804789_C0023032T180480_C001 CS_OFFL_SIR_GOPM_2_20230322T1804780_C001 CS_OFFL_SIR_GOPM_2_20230322T1804780_C001 CS_OFFL_SIR_GOPM_2_20230322T1804150_2023032ZT174030_C001 CS_OFFL_SIR_GOPM_2_2023032ZT174012_2023032ZT174030_C001 CS_OFFL_SIR_GOPM_2	CS_OFFL_SIR_GOPM_2_20230322T142417_20230322T142934_C001		
and Backscatter Quality, CCGG Altimeter Range and Backscatter Quality Flags have been altered frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or a frange and Backscatter Quality Flags have been set for an arm or a france frange and Backscatter Quality Flags have been set for an arm or arm or a france frange and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20230322T174413_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T17	CS_OFFL_SIR_GOPM_2_20230322T143952_20230322T145314_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been at the COGO Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at the Cogo Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags and the Cogo Altimeter Range and Backscatter Quality Flags and the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags and the Cogo Altimeter Range and Backscatter Quality Flags and the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at the Cogo Altimeter Range and Backscatter Quality Flags have been at	CS_OFFL_SIR_GOPM_2_20230322T145528_20230322T145656_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality CS_OFFL_SIR_GOPM_2_20230322T160344_20230322T160846_C001 CS_OFFL_SIR_GOPM_2_20230322T160344_20230322T160846_C001 CS_OFFL_SIR_GOPM_2_20230322T162323_20230322T162946_C001 CS_OFFL_SIR_GOPM_2_20230322T162323_20230322T162946_C001 CS_OFFL_SIR_GOPM_2_20230322T162323_20230322T162946_C001 CS_OFFL_SIR_GOPM_2_20230322T163424_20230322T163907_C001 CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T17840_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174403_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175203_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175203_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175203_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175203_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175200_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175200_C001 CS_OFFL_SIR_GOPM_2_20230322T	CS_OFFL_SIR_GOPM_2_20230322T145722_20230322T150730_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230322T162323_20230322T162946_C001 CS_OFFL_SIR_GOPM_2_20230322T163242_20230322T163907_C001 CS_OFFL_SIR_GOPM_2_20230322T163424_20230322T163907_C001 CS_OFFL_SIR_GOPM_2_20230322T163424_20230322T163907_C001 CS_OFFL_SIR_GOPM_2_20230322T163424_20230322T163907_C001 CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T17840_20230322T17840_20230322T178404_C001 CS_OFFL_SIR_GOPM_2_20230322T17840_20230322T174403_C001 CS_OFFL_SIR_GOPM_2_20230322T174413_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174403_20230322T175400_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175400_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T18208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T18208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T18208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T18208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T18208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_2023032T	CS_OFFL_SIR_GOPM_2_20230322T153452_20230322T154516_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality COG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality CS OFFL_SIR_GOPM 2 20230322T164150 20230322T164738 CO01 Coan Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Set for one or more records The Ocean Altimeter Range and Backscatter Quality Flags have been Set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range, SSHA, SWH and Bac	CS_OFFL_SIR_GOPM_2_20230322T160344_20230322T160846_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001 CS_OFFL_SIR_GOPM_2_20230322T171840_20230322T174103_C001 CS_OFFL_SIR_GOPM_2_20230322T171840_20230322T174103_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 Altimeter Range and Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality The Ocoa Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	CS_OFFL_SIR_GOPM_2_20230322T162323_20230322T162946_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20230322T171840_20230322T174103_C001 CS_OFFL_SIR_GOPM_2_20230322T174403_20230322T174103_C001 CS_OFFL_SIR_GOPM_2_20230322T174403_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174413_20230322T174804_C001 CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T175200_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T182408_C001 CS_OFFL_SIR_GOPM_2_20230322T182408_C001 CS_OFFL_SIR_GOPM_2_20230322T182408_C001 CS_OFFL_SIR_GOPM_2_20230322T182408_C001 CS_OFFL_SIR_GOPM_2_20230322T182408_C001 CS_OFFL_SIR_GOPM	CS_OFFL_SIR_GOPM_2_20230322T163424_20230322T163907_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230322T174840_20230322T174804_C001 and Backscatter Quality, 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 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality Flags have been set for one or more records OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG B	CS_OFFL_SIR_GOPM_2_20230322T164150_20230322T164738_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230322T174804_C001 Backscatter Quality CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 CS_OFFL_SIR_GOPM_2_20230322T185459_20230322T192033_C001 Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG 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 The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20230322T171840_20230322T174103_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20230322T175100_C001 Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been CS_OFFL_SIR_GOPM_2_20230322T185459_20230322T182033_C001 Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been The Ocean Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPM_2_20230322T174413_20230322T174804_C001		
CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001 and Backscatter Quality, 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, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatt	CS_OFFL_SIR_GOPM_2_20230322T174825_20230322T175100_C001		
CS_OFFL_SIR_GOPM_2_20230322T185459_20230322T192033_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPM_2_20230322T175401_20230322T182208_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_GOPM_2_20230322T185459_20230322T192033_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_GOPM_2_20230322T192158_20230322T192719_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_20230322T192725_20230322T193051_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_20230322T193309_20230322T200707_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_20230322T203142_20230322T205025_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_20230322T205349_20230322T210024_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_20230322T210159_20230322T210957_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_20230322T211241_20230322T214702_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_20230322T220032_20230322T220130_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_20230322T221253_20230322T221346_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_20230322T222828_20230322T223953_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_20230322T224133_20230322T224647_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_20230322T225208_20230322T231459_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_20230322T231745_20230322T232711_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_20230322T233852_20230322T233936_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_GOPN_2_20230322T021058_20230322T021216_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_GOPN_2_20230322T070026_20230322T070048_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_GOPN_2_20230322T124414_20230322T124558_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_20230322T143147_20230322T143347_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_GOPN_2_20230322T185050_20230322T185226_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_20230322T210035_20230322T210159_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_GOPR_2_20230322T001644_20230322T001838_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_GOPR_2_20230322T012204_20230322T012300_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_GOPR_2_20230322T015332_20230322T015445_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_GOPR_2_20230322T024822_20230322T025011_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_GOPR_2_20230322T101808_20230322T102646_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (20 Hz PLRM)

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

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

Number of products with errors:

84

Product	Test Failed	Description
	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230322T034817_20230322T034914_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_20230322T040837_20230322T041406_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_20230322T042922_20230322T043123_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_20230322T050628_20230322T051013_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_20230322T052532_20230322T053119_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_20230322T064605_20230322T064702_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_20230322T075030_20230322T075221_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 OFFI SIR GOPN 2 20230322T075826 20230322T075949 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_20230322T084751_20230322T085136_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_20230322T092805_20230322T093131_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_20230322T102646_20230322T102916_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_20230322T113726_20230322T114052_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_20230322T115654_20230322T115923_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_20230322T125441_20230322T125557_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_20230322T133722_20230322T133827_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20230322T143147_20230322T143347_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_20230322T153155_20230322T153452_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_20230322T161826_20230322T162323_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_20230322T162948_20230322T163417_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_20230322T165105_20230322T165617_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_20230322T174103_20230322T174413_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_20230322T175100_20230322T175321_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_20230322T182901_20230322T183440_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_20230322T185050_20230322T185226_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_20230322T200708_20230322T201134_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_20230322T210957_20230322T211109_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_20230322T220314_20230322T220437_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_20230322T222143_20230322T222225_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_20230322T224007_20230322T224133_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_20230322T224647_20230322T224950_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_20230322T235547_20230322T235748_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_20230322T001644_20230322T001838_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_20230322T001956_20230322T002705_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_20230322T002706_20230322T004207_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_20230322T015332_20230322T015445_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_20230322T015507_20230322T015622_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_20230322T015626_20230322T015655_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_20230322T015657_20230322T015707_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_20230322T015950_20230322T020557_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_20230322T022941_20230322T023136_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_20230322T024822_20230322T025011_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_20230322T031747_20230322T031948_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_20230322T033935_20230322T034346_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_20230322T034346_20230322T034617_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_20230322T035134_20230322T035353_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_20230322T035523_20230322T035726_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_20230322T051840_20230322T052002_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_20230322T052002_20230322T052531_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_20230322T053119_20230322T053340_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_20230322T060742_20230322T060855_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_20230322T065628_20230322T065852_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_20230322T070048_20230322T070549_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_20230322T083436_20230322T083627_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_20230322T083803_20230322T084750_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_20230322T092604_20230322T092805_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_20230322T101125_20230322T101421_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_20230322T101808_20230322T102646_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_20230322T114544_20230322T114622_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_20230322T114800_20230322T115125_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_20230322T115125_20230322T115654_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_20230322T115924_20230322T120649_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_20230322T120651_20230322T120707_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_20230322T133827_20230322T134531_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_20230322T134803_20230322T135307_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_20230322T140014_20230322T140455_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_20230322T145314_20230322T145527_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_20230322T150730_20230322T151242_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_20230322T151742_20230322T152432_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_20230322T164900_20230322T165105_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_20230322T165617_20230322T170238_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_20230322T183518_20230322T184418_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_20230322T201134_20230322T201917_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_20230322T202217_20230322T202417_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_20230322T210024_20230322T210034_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_20230322T214703_20230322T214707_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_20230322T215101_20230322T215739_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_20230322T215739_20230322T220032_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_20230322T220243_20230322T220314_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_20230322T222535_20230322T222828_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_20230322T224951_20230322T225207_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_20230322T232923_20230322T233638_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_20230322T233639_20230322T233852_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_20230322T234237_20230322T234833_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records		

L2 Quality Flags (1 Hz & 1 Hz PLRM)

Currently, there are several common flags raised in the Level 2 products, 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: 182

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: 64

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: 136

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

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_220230321T233623_20230322T002559_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_220230322T002559_20230322T011538_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_220230322T011538_20230322T020514_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_220230322T020514_20230322T025453_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_220230322T025453_20230322T034429_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_220230322T034429_20230322T043407_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_220230322T043407_20230322T052343_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_220230322T052343_20230322T061322_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220230322T061322_20230322T070258_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220230322T070258_20230322T075237_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_220230322T075237_20230322T084213_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_220230322T084213_20230322T093152_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_220230322T093152_20230322T102127_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_220230322T102127_20230322T111106_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_220230322T111106_20230322T120042_C001	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_220230322T120042_20230322T125021_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_220230322T125021_20230322T133957_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_220230322T133957_20230322T142935_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_220230322T142935_20230322T151911_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_220230322T151911_20230322T160850_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_220230322T160850_20230322T165826_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_220230322T165826_20230322T174805_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_220230322T174805_20230322T183741_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_220230322T183741_20230322T192720_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_220230322T192720_20230322T201655_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_220230322T201655_20230322T210634_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_220230322T210634_20230322T215610_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_220230322T215610_20230322T224549_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_220230322T224549_20230322T233525_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_220230322T233525_20230323T002504_C002		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

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_220230322T020514_20230322T025453_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220230322T201655_20230322T210634_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.

30

30

30

Number of products with errors:

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:

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:

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: 30

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	179	179	8	171	0
SIR_GOPR1B	116	116	0	116	0
SIR_GOPN1B	94	94	1	93	0
SIR_GOPM_2	179	179	121	58	0
SIR_GOPR_2	116	116	32	84	0
SIR_GOPN_2	94	94	34	59	1
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_GOPN_2	1	1	1	1							
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
Product Type SIR_GOP_2_	RLOBOPNCDF 1	RL 1	RLOBOPNCDF 1	RL 1	-	-	-	-	-	-	-

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

7.2 QCC Warnings

Number of QCC reports with warnings

2116

Total number of occurrences of each warning

 Total number of occurrences of each warning								
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	
SIR_GOPM1B	171	0	0	0	0	0	0	
SIR_GOPM_2	0	0	43	38	0	41	0	
SIR_GOPN1B	93	0	0	0	0	0	0	
SIR_GOPN_2	0	1	7	30	3	24	25	
SIR_GOPR1B	113	0	0	0	0	0	0	
SIR GOPR 2	0	0	22	33	1	29	26	

Product Type	RBSZOPOEPNCDF	RLPTONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNCDI	RPEPOPFDSARNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	33	4	1	35	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	16	23	0	0	0	17	0
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	21	36	4	0	38	0	46

Product Type	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	27	0	0	6	25	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	29	0	0	22	14	41	47
SIR_GOPR1B	0	0	0	0	0	0	0
SIR GOPR 2	0	0	34	0	6	60	27

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	4	31	0	3	0	0	0
SIR_GOPN1B	0	0	0	0	0	45	2
SIR_GOPN_2	20	29	28	14	1	0	0
SIR_GOPR1B	0	0	0	0	0	116	11
SIR_GOPR_2	11	31	41	2	2	0	0

_								
	Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
	SIR_GOP_2_	14		28	4	29	16	28

Product Type	RLPTONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCDI	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR_GOP_2_	29	3		26	20	16	29

Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-
SIR_GOP_2_	19	21	29	16	15	29	

Test Description Key:	est Description Key:						
Abbreviation	Test name	Details					
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter					
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)					
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only					
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RBSZOPOEPFDPLRM NCDF	TRANGEBACKSCATTETSIOMAZETO OPOJCEANEXCIUGINOPOJATEDZPI RIVINETO DE	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					
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	IRangePeakinessExcludingPolar()PED2PLRMSARNet(IDE	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	IRangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample					
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter					

7.3 Missing QCC Reports

Number of products with missing QCC reports:

L1B and L2 Product name

P2P Product name

CS_OFFL_SIR_GOP_2__20230322T233525_20230323T002504_C002