

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

29/07/2021

Report Production:	07 Aug 2021	Check	L1 & L2	P2P
Report Froduction.	27-Aug-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CrucSat Occan Brassager	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Useu.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Geophysical Ocean Products (GOP)	Product Format Check	Nominal	Nominal
Data Used:	L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6 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, 7.2 and 7.3	See Section 7.1, 7.2 and 7.3

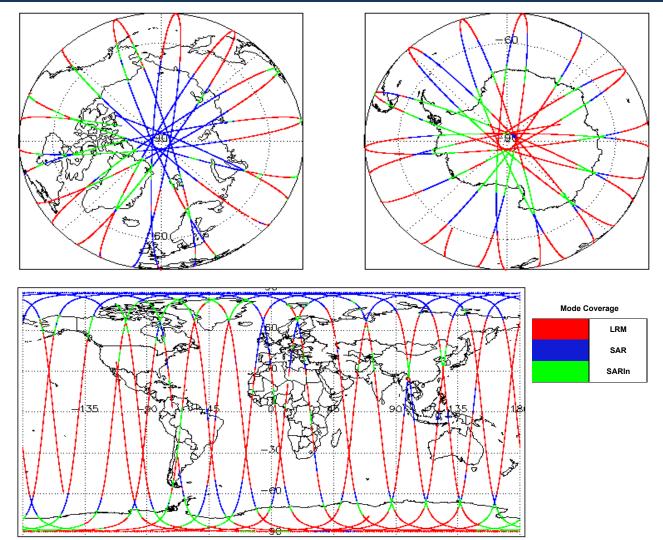
1. Overview

#### Mission / Instrument News 28-Jul-2021 None

Due to Orbit Control Manoeuvre, SIRAL was unavailable on 29/07/2021 from 01:42:52 UTC to 03:30:45 UTC. 29-Jul-2021

30-Jul-2021 Nothing planned





# 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

# 4. GOP Level 1B Data Quality Check

# 4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL). 0

#### 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 11b\_proc\_flag\_hr flag is currently set all L1B GOPR and GOPN products because the 11b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release

Number of products with errors:

#### 4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

#### 4.4 L1B Auxiliary Correction Error Check

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

0

0

Number of products with errors:

#### 4.5 L1B Measurement Confidence Data Check

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

Attitude Correction Missing: This flag is currently set in error for GOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update. 4

# Number of products with errors:

Product	Test Failed	Description
CS OFFL SIR GOPM1B 20210729T010118 20210729T010816 C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more
	i olioi oodaalig olioi	records
CS OFFL SIR GOPM1B 20210729T123658 20210729T124023 C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more
		records
CS OFFL SIR GOPM1B 20210729T141721 20210729T144838 C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more
	r ower scaling error	records
CS OFFL SIR GOPM1B 20210729T153313 20210729T153345 C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more
C5_011 E_311_GOF101B_202107291133313_202107291133343_0001	Fower scaling error	records

# 4.6 L1B Waveform Group Data Check

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

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

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#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20210729T050905_20210729T054450_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210729T064850_20210729T070417_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210729T141721_20210729T144838_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210729T205943_20210729T210915_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210729T211116_20210729T212545_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T040313_20210729T040423_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T064116_20210729T064641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T091110_20210729T091221_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T094809_20210729T094937_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T105031_20210729T105136_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T105304_20210729T105508_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T132139_20210729T132428_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T141235_20210729T141721_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T153203_20210729T153305_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T154305_20210729T154350_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T155355_20210729T155548_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T190213_20210729T190326_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210729T213525_20210729T214135_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210729T055634_20210729T060649_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210729T153124_20210729T153203_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210729T171050_20210729T171127_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210729T171547_20210729T172023_C001	Loss of Echo	The tracking echo is missing for one or more records

# 5. GOP Level 2 Data Quality Check

# 5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL). Number of products with errors:

#### 5.2 L2 Product Header Analysis

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

# 5.3 L2 Auxiliary Data File Usage Check

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

# 5.4 L2 Auxiliary Correction Error Check

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

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

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

# > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

> Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

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Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210729T014251_20210729T014253_C001	GPD Wet Tropospheric Correction	There is an error with the GPD Wet Tropospheric correction for one or more records
CS_OFFL_SIR_GOPM_2_20210729T033047_20210729T040312_C001	GPD Wet Tropospheric Correction	There is an error with the GPD Wet Tropospheric correction for one or more records
CS_OFFL_SIR_GOPN_2_20210729T000709_20210729T000901_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_20210729T045538_20210729T045703_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_20210729T050213_20210729T050520_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20210729T063618_20210729T063908_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_20210729T064116_20210729T064641_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_20210729T073210_20210729T073636_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_20210729T081552_20210729T081827_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_20210729T091110_20210729T091221_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_20210729T094809_20210729T094937_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_20210729T095304_20210729T095643_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_20210729T105031_20210729T105136_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_20210729T105304_20210729T105508_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_20210729T113315_20210729T113505_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_20210729T114324_20210729T114543_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_20210729T123027_20210729T123454_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_20210729T141235_20210729T141721_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_20210729T145249_20210729T145628_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_20210729T155355_20210729T155548_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_20210729T163215_20210729T163533_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_20210729T164045_20210729T164210_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_20210729T172303_20210729T172408_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_20210729T181950_20210729T182058_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_20210729T190213_20210729T190326_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_20210729T203920_20210729T204226_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_20210729T204229_20210729T204242_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_20210729T213525_20210729T214135_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_20210729T221712_20210729T222028_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_20210729T222031_20210729T222127_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_20210729T230604_20210729T230830_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_20210729T231458_20210729T231810_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_20210729T235601_20210729T235950_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210729T004950_20210729T005944_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_20210729T040615_20210729T041302_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_20210729T041302_20210729T041430_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_20210729T054450_20210729T055204_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_20210729T055204_20210729T055438_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_20210729T055634_20210729T060649_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210729T072448_20210729T072544_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210729T072639_20210729T073058_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_20210729T073058_20210729T073210_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_20210729T090427_20210729T090921_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_20210729T090921_20210729T091110_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_20210729T102152_20210729T102846_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210729T104418_20210729T105030_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_20210729T122556_20210729T123027_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_20210729T140336_20210729T141235_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_20210729T154350_20210729T155138_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_20210729T172408_20210729T173206_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_20210729T190327_20210729T191044_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_20210729T204242_20210729T205016_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_20210729T210915_20210729T211116_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210729T222127_20210729T222822_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_20210729T235950_20210730T000822_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records

# 5.5 L2 Measurement Confidence Data Check

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

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210729T010118_20210729T010816_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_20210729T123658_20210729T124023_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_20210729T141721_20210729T144838_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_20210729T153313_20210729T153345_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

# 5.6 L2 Measurement Quality Flag Check

# L2 Quality Flags (20Hz)

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

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210728T235955_20210729T000329_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_20210729T000351_20210729T000709_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_20210729T001040_20210729T003842_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_20210729T010930_20210729T013438_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_20210729T013738_20210729T014244_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_20210729T033047_20210729T040312_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_20210729T040423_20210729T040444_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_20210729T040520_20210729T040549_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_20210729T041535_20210729T041713_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_20210729T043550_20210729T045159_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_20210729T045703_20210729T050212_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_20210729T050904_20210729T054450_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_20210729T055438_20210729T055634_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_20210729T060650_20210729T061120_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_20210729T061206_20210729T062941_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_20210729T064850_20210729T070417_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_20210729T070427_20210729T072448_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_20210729T073655_20210729T075534_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_20210729T075633_20210729T081005_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_20210729T081828_20210729T082026_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_20210729T082144_20210729T082528_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_20210729T082748_20210729T084246_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_20210729T084448_20210729T085411_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_20210729T091600_20210729T093303_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_20210729T094937_20210729T095056_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have bee

CS_OFFL_SIR_GOPM_2_20210729T095643_20210729T100430_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_20210729T100726_20210729T102152_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_20210729T105953_20210729T113134_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_20210729T113505_20210729T113719_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_20210729T113731_20210729T114324_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_20210729T114721_20210729T121138_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_20210729T124544_20210729T131022_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_20210729T131716_20210729T132139_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_20210729T132623_20210729T134645_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_20210729T135349_20210729T135431_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_20210729T141721_20210729T144838_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_20210729T145628_20210729T150205_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_20210729T150518_20210729T150949_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_20210729T151352_20210729T151716_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_20210729T155549_20210729T162836_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_20210729T163533_20210729T164044_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_20210729T164601_20210729T170229_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_20210729T173207_20210729T180726_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_20210729T181310_20210729T181533_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_20210729T181550_20210729T181950_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_20210729T182437_20210729T185028_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_20210729T185049_20210729T185820_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_20210729T185820_20210729T185832_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_20210729T190019_20210729T190213_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_20210729T191045_20210729T192511_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_20210729T192952_20210729T194216_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_20210729T194339_20210729T194649_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_20210729T194914_20210729T195433_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_20210729T195451_20210729T195655_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_20210729T200539_20210729T201753_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_20210729T202019_20210729T203840_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_20210729T205943_20210729T210914_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_20210729T211116_20210729T212545_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_20210729T212840_20210729T213334_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_20210729T213409_20210729T213524_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_20210729T220037_20210729T220359_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_20210729T220522_20210729T220748_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_20210729T224904_20210729T230442_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_20210729T230830_20210729T231302_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_20210729T232021_20210729T234242_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_20210729T064116_20210729T064641_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_20210729T100430_20210729T100617_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_20210729T004950_20210729T005944_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_20210729T075535_20210729T075633_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_20210729T081005_20210729T081552_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_20210729T084247_20210729T084448_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_20210729T122145_20210729T122408_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_20210729T140336_20210729T141235_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.

# L2 Quality Flags (20Hz PLRM)

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

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

Product	Test Failed	Description
	<b>3</b>	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20210729T010103_20210729T010118_C001	<b>3</b>	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
	<b>3</b>	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_GOPN_2_20210729T041713_20210729T041817_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_20210729T045538_20210729T045703_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_20210729T050213_20210729T050520_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_20210729T061120_20210729T061206_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_20210729T063618_20210729T063908_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_20210729T064116_20210729T064641_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_20210729T072545_20210729T072638_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_20210729T073210_20210729T073636_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_20210729T081552_20210729T081827_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_20210729T085411_20210729T085722_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_20210729T091110_20210729T091221_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_20210729T091345_20210729T091559_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_20210729T093334_20210729T093937_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_20210729T094008_20210729T094408_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_20210729T094809_20210729T094937_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_20210729T095304_20210729T095643_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_20210729T100430_20210729T100617_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_20210729T103106_20210729T103435_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_20210729T105304_20210729T105508_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_20210729T105829_20210729T105953_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_20210729T113315_20210729T113505_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_20210729T121138_20210729T121512_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_20210729T123027_20210729T123454_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_20210729T124023_20210729T124256_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_20210729T131250_20210729T131429_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_20210729T131546_20210729T131716_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_20210729T132139_20210729T132428_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_20210729T141235_20210729T141721_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_20210729T150206_20210729T150320_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_20210729T154305_20210729T154350_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_20210729T155355_20210729T155548_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_20210729T163215_20210729T163533_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_20210729T180929_20210729T181310_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_20210729T194736_20210729T194914_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_20210729T195655_20210729T195842_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_20210729T203920_20210729T204226_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_20210729T205551_20210729T205943_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_20210729T212655_20210729T212840_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_20210729T213525_20210729T214135_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_20210729T221712_20210729T222028_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_20210729T223800_20210729T224109_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_20210729T230604_20210729T230830_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_20210729T235356_20210729T235518_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_20210729T004950_20210729T005944_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_20210729T041820_20210729T042151_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_20210729T045159_20210729T045538_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_20210729T050520_20210729T050904_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_20210729T054450_20210729T055204_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_20210729T055634_20210729T060649_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_20210729T062941_20210729T063618_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_20210729T075535_20210729T075633_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_20210729T081005_20210729T081552_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_20210729T082709_20210729T082748_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_20210729T090427_20210729T090921_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_OFTL_SRL_0OPR_2_20210729T10216_20210729T10206_0021         COCC Altheretic Regro, Daily PLM, COCC Altheretic Regro, Daily PLM, CS_OFTL_SRL_0OPR_2_20210729T10416_20210	CS_OFFL_SIR_GOPR_2_20210729T100617_20210729T100726_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_SR_GOPR_2_302107281103416_200107281110309_0001       mill Selectater Outling PLIMS_COS       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281114443_002107281114472_0001       Obern Afmine Reings, SSM, SVH       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281114443_002107281114472_0001       Obern Afmine Reings, SSM, SVH       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281123425_002107281123425_0001       OCOS Afmine Reings, SSM, SVH       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281123425_002107281123425_0001       OCOS Afmine Reings, SSM, SVH       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_002107281133425_0001       OCOS Afmine Reings, SSM, SVH       mill Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_00210728113342_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133425_00017027113522_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS         CS_OFFL_SR_GOPR_2_302107281133426_001728713640_0001       OCOS Afmine Reings, SSM, SVH and Selectater Outling PLIMS_COS	CS_OFFL_SIR_GOPR_2_20210729T102152_20210729T102846_C001		
G8_0FH_SR_00FR_2_3221072111442_3221072011472_001         and Selected Product Value (* region and Selected Could) Flag (* red exceeds and the exceed and the exceedes and the exceedes and the	CS_OFFL_SIR_GOPR_2_20210729T104418_20210729T105030_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Copertuging Copert Copertuging Copertuging Copertuging Copertuging	CS_OFFL_SIR_GOPR_2_20210729T114543_20210729T114721_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
GS_OFFL_SIR_GOPR_2_20210729T130428_20210729T130422_0001         and Balactater Quality PLRN, QOOL PLRN, Distance Ronge and Balactater Quality PLRN, QOOL Attributer Range QUALITY PLRN, PLRN, PLRN, PLRN, PLRN, PLRN, PLRN, PLRN, PLRN,	CS_OFFL_SIR_GOPR_2_20210729T122145_20210729T122408_C001		
CS_OFFL_SIR_GOPR_2.20210720T150321_20210729T150518_CO01       Ind Science and Backscatter Quality Flags, Sork, Sork and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T150040_20210720T161362_O001       OCCG Athereter Range Quality FLRM, OCCG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T153688_20210720T164007_CO01       OCCG Athereter Range Quality FLRM, OCCG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T153688_20210720T164007_CO01       OCCG Athereter Range Quality FLRM, OCCG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T164201_20210720T164007_CO01       OCCG Athereter Range Quality FLRM, OCCG Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T164210_20210720T164201_20210720T164200_20210720T164210_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T164200_20210720T173206_CO01       OCCG Athereter Range Quality FLRM, OCCG Athereter Range CS1A, SVM and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T172408_20210720T173206_C001       OCCG Athereter Range Quality FLRM, OCCG Athereter Range CS1A, SVM and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T172408_20210720T173206_C001       OCCG Athereter Range CS1A, SVM and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2.20210720T1240270_20120720T2012910020_0011	CS_OFFL_SIR_GOPR_2_20210729T132428_20210729T132622_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_202107207163049_202107207164007_C001       OCOG Backscatter Quality PLRM, COGG Backscatter Quali	CS_OFFL_SIR_GOPR_2_20210729T150321_20210729T150518_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_202107291162836_202107291162214_C001     OCOG Backscatter Quality     or more records.       CS_OFFL_SIR_GOPR_2_202107291162836_202107291162214_C001     Minimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality Flags.     more records.       CS_OFFL_SIR_GOPR_2_202107291162836_202107291162210_202107291164210_202107291164210_2021072911642001     DOcean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       CS_OFFL_SIR_GOPR_2_202107291160327_202107291160327_202107291160327_202107291190327_202107291190327_202107291202019_C001     DOcean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       CS_OFFL_SIR_GOPR_2_202107291201808_202107291202019_C001     DOCOG Altimeter Range Guality PLRM, DOCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       CS_OFFL_SIR_GOPR_2_202107291221365_202107291220219_C001     DCOCG Altimeter Range Guality PLRM, DOCOG Altimeter Range Guality FLRM, The OCOG Altimeter Range SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       <	CS_OFFL_SIR_GOPR_2_20210729T150949_20210729T151352_C001		
CS_OFFL_SIR_GOPR_2_20210729T162346_20210729T163214_C001         and Backscatter Quality FLM, C0CO Attemeter Range and Backscatter Quality FLM, C0CO Attemeter Range, SHA, SWH and Backscatter Quality FLM, C0CO Attemeter Range, SHA, SWH and Backscatter Quality FLM, C0CO Attemeter Range and Backscatter Quality FLM, C0CO Attemeter Range and Backscatter Quality FLM, C0CO Attemeter Range and Backscatter Quality FLM, C	CS_OFFL_SIR_GOPR_2_20210729T153658_20210729T154007_C001		
CS_OFFL_SIR_GOPR_2_20210729T16420_20210729T16420_C001       and Backscatter Quality PLRM, Quality PLRM, Quality PLSM, Quality PLSM, Quality FLSK, GOPR_2_20210729T172408_20210729T173206_C001       OCGG Alimeter Range and Backscatter Quality FLSK, Quality FLSK, Quality FLSK, QGPR_2_20210729T174082_20210729T193029_C001       The OCCG Rameer Range and Backscatter Quality FLSK, QGPR_2_20210729T180726_20210729T180929_C001         CS_OFFL_SIR_GOPR_2_20210729T180726_20210729T190929_C001       OCGG Alimeter Range, SSHA, SWH and Backscatter Quality FLSK, QGPR_2_20210729T190327_20210729T191044_C001       The OCCG Rameer Range, SSHA, SWH and Backscatter Quality FLSK, QGPR_2_20210729T1910327_20210729T191044_C001         CS_OFFL_SIR_GOPR_2_20210729T1910327_20210729T191044_C001       Decom Altimeter Range, SSHA, SWH and Backscatter Quality FLSK, QGPR_2_20210729T1910327_20210729T202019_C001       The OCCG Alimeter Range, SSHA, SWH and Backscatter Quality FLSK, AGPR         CS_OFFL_SIR_GOPR_2_20210729T201919_004       OCCG Alimeter Range Quality PLRM, OCGG Alimeter Range and Backscatter Quality FLSK, AGPR       The OCCG Rameer Range and Backscatter Quality FLSK, AGPR         CS_OFFL_SIR_GOPR_2_20210729T213351_C001       OCCG Alimeter Range Quality PLRM, COGG Range and Backscatter Quality FLSK, AGPR       The OCCGR Rameer Range and Backscatter Quality FLSK, AGPR         CS_OFFL_SIR_GOPR_2_20210729T2213351_C001       OCCG Alimeter Range Quality PLRM, COGG Rameer Range and Backscatter Quality FLSK, SWH       The OCCGR Rameer Range and Backscatter Quality FLSK, AGPR         CS_OFFL_SIR_GOPR_2_20210729T2242151_C001       OCCG Alimeter Range Quality PLRM, COGG Rameer Range and Backscatter Quality FLSK, SWH       The O	CS_OFFL_SIR_GOPR_2_20210729T162836_20210729T163214_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCOG Backscatter Quality       or more records.         CS_OFFL_SIR_GOPR_2_20210729T180726_20210729T180929_C001       Ocog Backscatter Quality PLRM, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T190327_20210729T191044_C001       Ocog Altimeter Range and Backscatter Quality PLRM, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T201808_20210729T202019_C001       OCOG Altimeter Range Quality PLRM, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T201808_20210729T202019_C001       OCOG Altimeter Range Quality PLRM, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T213345_20210729T213351_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_2001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or m	CS_OFFL_SIR_GOPR_2_20210729T164210_20210729T164601_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20210729T180726_20210729T180329_C001       and Backscatter Quality PLags have been performed backscat	CS_OFFL_SIR_GOPR_2_20210729T172408_20210729T173206_C001		
CS_OFFL_SIR_GOPR_2_20210729T190327_20210729T191044_C001       and Backscatter Quality PLRM, OCGA       Inte Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T201808_20210729T202019_C001       OCOG Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T213345_20210729T213351_C001       OCOG Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_C001       Ocean Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_C001       OCOG Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_C001       OCOG Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_	CS_OFFL_SIR_GOPR_2_20210729T180726_20210729T180929_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20210729T213345_20210729T213351_C001       OCOG Backscatter Quality       or more records.         CS_OFFL_SIR_GOPR_2_20210729T213345_20210729T213351_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH       The OCOG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       Ocean Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_20210729T224708_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224064_C001       OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T230604_C001       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_20210729T231810_20210729T230201_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Alti	CS_OFFL_SIR_GOPR_2_20210729T190327_20210729T191044_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_202107291213345_202107291213351_C001       OCOG Backscatter Quality       or more records.         CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       Ocean Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       Ocean Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224451_20210729T224708_C001       OCCG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T230443_20210729T230604_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T230604_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T232021_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T232021_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20210729T201808_20210729T202019_C001		
CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001       and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM       In the OCGA Itimeter Range, and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224708_C001       OCOG Altimeter Range, Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T230644_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20210729T213345_20210729T213351_C001		
CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       Ind Cocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224708_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCCean Altimeter Range, and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T230604_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG 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 Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Ba	CS_OFFL_SIR_GOPR_2_20210729T221357_20210729T221615_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_202107291224451_202107291224/08_C001       OCOG Backscatter Quality       or more records.         CS_OFFL_SIR_GOPR_2_202107291230443_202107291230604_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range and Backscatter Quality FLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_202107291231810_202107291232021_C001       Altimeter Range and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCOG Altimeter Range and Backscatter Quality FLRM, ocog and the OCO	CS_OFFL_SIR_GOPR_2_20210729T224217_20210729T224451_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20210729T230443_20210729T230604_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       Ind Ocean Altimeter Range and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T232021_C001       and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20210729T224451_20210729T224708_C001		
CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T232021_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPR_2_20210729T230443_20210729T230604_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_GOPR_2_20210729T231810_20210729T232021_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been

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

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

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

Number of products with errors:

# 5.8 L2 Ocean Retracking Quality Check

# L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

# L2 Retracking Flags (20Hz, PLRM)

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

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

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

#### 6.1 P2P Product Format Check

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

Number of products with errors:

#### 6.2 P2P Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 0

# 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

# 6.4 P2P Auxiliary Correction Error Check

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

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

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

> Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

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#### Number of products with errors:

Test Failed Product Description Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS OFFL SIR GOP 2 20210729T000344 20210729T005322 C001 Topography (1) Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T005322\_20210729T014259\_C001 Topography (1) Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_20210729T032214\_20210729T041151\_C001 Topography (1) Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS OFFL SIR GOP 2 20210729T041151 20210729T050128 C001 Topography (1) Topography height (solution 1) for one or more records ean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), Total Geocentric Ocear Topography height (solution 1), the Total Geocentric Ocean Tide height Tide (GOT), Total Geocentric Ocean CS OFFL SIR GOP 2 20210729T050128 20210729T055106 C001 solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height Tide (FES), Non-Equilibrium Long Perio for one or more records Ocean Tide There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T055106\_20210729T064043\_C001 Topography (1) Topography height (solution 1) for one or more records Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS OFFL SIR GOP 2 20210729T064043 20210729T073020 C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS OFFL SIR GOP 2 20210729T073020 20210729T081958 C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_20210729T081958\_20210729T090935\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1). Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T090935\_20210729T095912\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T095912\_20210729T104850\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T104850\_20210729T113827\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T113827\_20210729T122805\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T122805\_20210729T131742\_C001 Topography (1) Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS OFFL SIR GOP 2 20210729T131742 20210729T140719 C001 Topography height (solution 1) for one or more records Topography (1) ere is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS OFFL SIR GOP 2 20210729T140719 20210729T145657 C001 Topography (1), Total Geocentric Ocear Topography height (solution 1) and the Total Geocentric Ocean Tide Tide (GOT) height (solution 1: GOT) for one or more records Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS OFFL SIR GOP 2 20210729T145657 20210729T154634 C001 Topography height (solution 1) for one or more records Topography (1) There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T154634\_20210729T163611\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T163611\_20210729T172549\_C001 Topography (1) Topography height (solution 1) for one or more records Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T172549\_20210729T181526\_C001 Topography height (solution 1) for one or more records Topography (1) Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_\_20210729T181526\_20210729T190503\_C001 Topography (1) Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Mean Sea Surface (1), Mean Dynamic CS\_OFFL\_SIR\_GOP\_2\_20210729T190503\_20210729T195440\_C001 Topography (1) Topography height (solution 1) for one or more records

CS_OFFL_SIR_GOP_220210729T195440_20210729T204418_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_220210729T204418_20210729T213355_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_2_20210729T213355_20210729T222333_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_2_20210729T222333_20210729T231310_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_220210729T231310_20210730T000247_C002	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

# 6.5 P2P Measurement Confidence Data Check

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

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#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20210729T005322_20210729T014259_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220210729T122805_20210729T131742_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_2_20210729T140719_20210729T145657_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220210729T145657_20210729T154634_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 (20Hz)

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

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

#### Number of products with errors:

## P2P Quality Flags (20Hz PLRM)

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

#### Number of products with errors:

#### P2P Quality Flags (1 Hz & 1Hz PLRM)

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

#### Number of products with errors:

# 6.8 P2P Ocean Retracking Quality Check

#### P2P Retracking Flags (20Hz)

Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

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

#### Number of products with errors:

#### 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:

# 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	142	140	2	138	0
SIR_GOPR1B	95	94	0	94	0
SIR_GOPN1B	99	97	2	95	0
SIR_GOPM_2	142	140	94	46	0
SIR_GOPR_2	95	94	25	68	1
SIR_GOPN_2	99	97	40	57	0
SIR_GOP_P2P	27	26	0	25	1

# 7.1 QCC Errors

#### Number of QCC reports with errors:

 Total number of occurrences of each error

 Product Type
 RLOBOPNCDF
 RL
 RLOBOPNCDF
 RL
 -<

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

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SIR_GOPM1B	138	0	0	0	0	0	0
SIR_GOPM_2	0	0	31	29	1	35	0
SIR_GOPN1B	95	0	0	0	0	0	0
SIR_GOPN_2	0	0	10	32	2	23	31
SIR_GOPR1B	93	0	0	0	0	0	0
SIR GOPR 2	0	1	40	45	0	38	36
Product Type	RBSZOPOEPNCDF	RORTOSOFDNCDF	RORTOSONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCI	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	32	0	0	27	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	21	0	0	0	0	22	0
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	22	1	1	0	47	0	54
Product Type	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	16	0	0	6	25	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	33	0	0	28	20	44	51
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	0	47	0	5	61	41
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SPHRTASCNSNCDF	SOOHHIFHD
SIR_GOPM1B	0	0	0	0	1	1	0
SIR_GOPM_2	4	30	0	2	1	1	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	27	28	27	12	0	0	4
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	9	42	49	4	0	0	1
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	
SIR_GOP_2_	15	26	26	2	26	18	26
Product Type	RORTOSOFDNCDF	RORTOSONCDF	RPEPOPFDPLRMSINNCD		RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR_GOP_2_	1	1	18	26	22	20	26
Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-
SIR_GOP_2_	17	25	26	19	14	26	

Test Description Key:		
Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RORTOSOFDNCDF	RangeOceanRangeToOceanSurfaceOceanFD2NetCDF	#N/A
RORTOSONCDF	RangeOceanRangeToOceanSurfaceOceanNetCDF	#N/A
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN		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	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMN	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

# 7.3 Missing QCC Reports

# Number of products with missing QCC reports:

Product name
CS_OFFL_SIR_GOPM1B_20210729T234244_20210729T235356_C001
CS_OFFL_SIR_GOPM1B_20210729T235519_20210729T235600_C001
CS_OFFL_SIR_GOPM_2_20210729T234244_20210729T235356_C001
CS_OFFL_SIR_GOPM_2_20210729T235519_20210729T235600_C001
CS_OFFL_SIR_GOPN1B_20210729T235356_20210729T235518_C001
CS_OFFL_SIR_GOPN1B_20210729T235601_20210729T235950_C001
CS_OFFL_SIR_GOPN_2_20210729T235356_20210729T235518_C001
CS_OFFL_SIR_GOPN_2_20210729T235601_20210729T235950_C001

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# Product name CS\_OFFL\_SIR\_GOP\_2\_20210729T231310\_20210730T000247\_C002 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0