

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

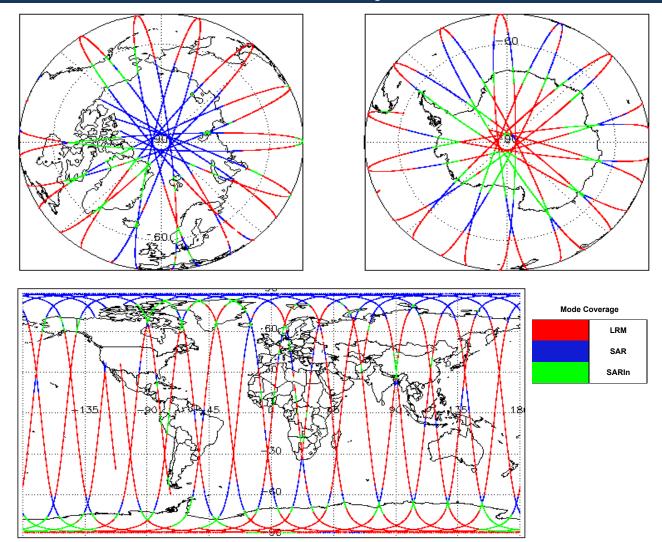
<u>16/08/2021</u>

		Check	L1 & L2	P2P
Report Production:	21-Sep-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Des ses sen lles de		Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	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 and 7.2	See Section 7.1, 7.2 and 7.3

1. Overview

# Mission / Instrument News 15-Aug-2021 None 16-Aug-2021 None 17-Aug-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 I1b\_proc\_flag\_hr flag is currently set all L1B GOPR and GOPN products because the I1b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release. Number of products with errors: 0 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: 0 4.4 L1B Auxiliary Correction Error Check CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set. Number of products with errors: 0 4.5 L1B Measurement Confidence Data Check CryoSat L1B data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20210816T103858_20210816T104600_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20210816T203215_20210816T203804_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

### 4.6 L1B Waveform Group Data Check

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

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

14

2

### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20210816T005055_20210816T011709_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T052444_20210816T052804_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T130913_20210816T132834_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T132836_20210816T133628_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T134252_20210816T134708_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T185314_20210816T190757_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T200308_20210816T201915_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20210816T215931_20210816T215942_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210816T085819_20210816T090026_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210816T103318_20210816T103814_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210816T184506_20210816T184606_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20210816T202306_20210816T202402_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210816T093433_20210816T093700_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20210816T144550_20210816T144818_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.

54

Number of products with errors:

Product

Test Failed

CS_OFFL_SIR_GOPM_2_20210816T021824_20210816T022225_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20210816T090026_20210816T091417_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20210816T103815_20210816T103832_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_GOPM_2_20210816T130913_20210816T132833_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20210816T215931_20210816T215942_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_GOPM_2_20210816T235157_20210816T235228_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_20210816T020658_20210816T020818_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_20210816T025904_20210816T030029_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_20210816T030553_20210816T030905_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_20210816T043841_20210816T043956_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_20210816T044452_20210816T044815_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_20210816T061929_20210816T062205_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_20210816T062358_20210816T063024_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_20210816T071444_20210816T071605_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20210816T075448_20210816T080059_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_20210816T085404_20210816T085507_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_20210816T103318_20210816T103814_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20210816T125753_20210816T130000_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perior 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_20210816T143551_20210816T143909_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_20210816T144431_20210816T144550_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_20210816T161443_20210816T161804_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_20210816T162326_20210816T162451_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_20210816T170528_20210816T170706_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20210816T180145_20210816T180320_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_20210816T184506_20210816T184606_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_20210816T193918_20210816T194127_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_20210816T202418_20210816T202521_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_20210816T210936_20210816T211123_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_20210816T215942_20210816T220349_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_20210816T225904_20210816T230106_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_20210816T003057_20210816T003951_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_20210816T021022_20210816T021824_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_20210816T022718_20210816T022906_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_20210816T034811_20210816T035546_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_20210816T035546_20210816T035715_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_20210816T040332_20210816T040506_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_20210816T052804_20210816T053445_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_20210816T053445_20210816T053834_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_20210816T070720_20210816T071333_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_20210816T071333_20210816T071444_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_20210816T073705_20210816T073918_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20210816T084734_20210816T084907_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_20210816T084939_20210816T085125_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_20210816T085125_20210816T085404_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_20210816T102604_20210816T102708_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_20210816T102708_20210816T103317_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_20210816T120831_20210816T121340_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_20210816T133628_20210816T133740_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_20210816T133743_20210816T133827_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_20210816T134731_20210816T135538_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_20210816T152621_20210816T153448_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_20210816T170706_20210816T171456_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_20210816T184606_20210816T185150_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_20210816T202521_20210816T203215_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_20210816T220349_20210816T220910_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_20210816T234212_20210816T235157_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

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# 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:	2		
Product		Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210816T103	858_20210816T104600_C001	Power scaling error	There is an error in the scaling of the L2 wavef

CS_OFFL_SIR_GOPM_2_20210816T103858_20210816T104600_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_20210816T203215_20210816T203804_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.

81

Product	Test Failed	Description
		The Ocean Altimeter 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_20210816T004158_20210816T004544_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_20210816T005055_20210816T011709_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_20210816T012036_20210816T012523_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_20210816T013347_20210816T020657_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_20210816T024103_20210816T024335_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_20210816T024556_20210816T024933_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_20210816T025150_20210816T025338_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_20210816T030029_20210816T030553_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_20210816T031258_20210816T033359_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_20210816T033645_20210816T034810_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_20210816T035822_20210816T040149_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_20210816T041801_20210816T043443_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_20210816T043956_20210816T044452_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_20210816T045202_20210816T052441_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_20210816T053834_20210816T053920_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_20210816T054757_20210816T061231_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_20210816T062205_20210816T062358_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_20210816T063146_20210816T063815_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_20210816T064358_20210816T064820_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_20210816T065302_20210816T070103_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_20210816T072058_20210816T073704_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_20210816T073918_20210816T075334_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_20210816T080354_20210816T080812_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_20210816T081037_20210816T082450_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_20210816T082629_20210816T084707_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_20210816T090026_20210816T091417_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_20210816T092111_20210816T093433_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.

Ocean Altimeter Range, SSHA, SWH and Backscatter Quality. VGCG Altimeter Range and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.           05_0FFL_SIR_GOPM_2_20210816T103256_02120816T104600_C001         Crean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.           05_0FFL_SIR_GOPM_2_20210816T104821_0210816T111416_C001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.           CS_OFFL_SIR_GOPM_2_20210816T113129_0210816T115252_0001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.           CS_OFFL_SIR_GOPM_2_20210816T112028_0210816T1120521_0001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.           CS_OFFL_SIR_GOPM_2_20210816T120782_00110816T120532_0001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         The Ocean Altimeter Range, SSHA, SWH and B	lity Flags have been catter Quality Flags lity Flags have been catter Quality Flags lity Flags have been Flags have been set catter Quality Flags lity Flags have been catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T104821_20210816T104600_C001       and Backscatter Quality, COCG       and the OCCG Altimeter Range and Backscatter Quality and the OCGG Altimeter Range and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T1104821_20210816T111416_C001       Ocean Altimeter Range and Backscatter Quality, COCG       The Ocean Altimeter Range and Backscatter Quality, SCGG         CS_OFFL_SIR_GOPM_2_20210816T112038_20210816T112532_C001       OCCG Altimeter Range and Backscatter Quality, COCG       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T112032_00210816T115325_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, COCG       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120521_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, COCG       The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120532_C001       Ocean Altimeter Range and Backscatter Quality, COCG       The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T12053_20210816T120733_C001       Ocean Altimeter Range and Backscatter Quality, SCGG       The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, COCG         CS_OFFL_SIR_GOPM_2_20210816T122708_20210816T125235_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, SCGG       The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, SCGG         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132933_C001	lity Flags have been catter Quality Flags lity Flags have been Flags have been set catter Quality Flags lity Flags have been catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T104821_20210816T111416_C001       and Backscatter Quality. OCCG       and the OCCG Allimeter Range and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T112038_20210816T112532_C001       CCCG Allimeter Range Quality. OCCG       The OCGA Allimeter Range and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T113129_20210816T115325_C001       CCCGA Allimeter Range CSHA, SWH and Backscatter Quality.       The OCGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120521_C001       CCCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       The OCGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T120551_20210816T120532_C001       CCCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       The OCGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T120651_20210816T120733_C001       CCCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       The OCGGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T12053_C001       CCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       CCGGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T120703_C001       CCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       CCGGA Allimeter Range, SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T120708_C001       CCGA Allimeter Range, SSHA, SWH and Backscatter Quality.       CCGGA Allimeter Range, SSHA, SWH and Backscatter Quality.	lity Flags have been Flags have been set catter Quality Flags lity Flags have been catter Quality Flags
US_OFFL_SIR_GOPM_2_20210816T112035_2001       Backscatter Quality       for one or more records.         GS_OFFL_SIR_GOPM_2_20210816T113129_20210816T115325_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         GS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120521_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality set for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality set for one or more records.         GS_OFFL_SIR_GOPM_2_20210816T120551_20210816T120733_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality set for one or more records.         GS_OFFL_SIR_GOPM_2_20210816T122708_20210816T122733_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality set for one or more records.         GS_OFFL_SIR_GOPM_2_20210816T122708_20210816T125235_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         GS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality.         GS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality.         GS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         GS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.         GS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Decean Altimeter Range, SSHA, SWH and Backscatter Quality.	catter Quality Flags lity Flags have been catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T11329_20210816T115325_C001       and Backscatter Quality       and the COCG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120521_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T120551_20210816T120733_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T120733_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T122708_20210816T125235_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       CCG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality of one or more records.         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       CCG Altimeter Range, SSHA, SWH and Backscatter Quality of one or more records.       The OCCG Altimeter Range and Backscatter Quality of one or more records.         CS_OFFL_SIR_GOPM_2_20210816T130552_20210816T130733_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality of one or more records.       The OCCG Altimeter Range and Backscatter Quality of or one or more records.         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T130283_C001       Cean Altimeter Range, SSHA, SWH	lity Flags have been catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T120238_20210816T120521_C001       and Backscatter Quality. OCOG         AMI timeter Range and Backscatter Quality.       set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T120651_20210816T120733_C001       Ocean Altimeter Range. SSHA, SWH and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T120708_20210816T125235_C001       Ocean Altimeter Range. SSHA, SWH and Backscatter Quality and Backscatter Quality.       The Ocean Altimeter Range. SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       OCGG Altimeter Range Quality. OCOG Altimeter Range and Backscatter Quality.       The OCCG Altimeter Range and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       OCGG Altimeter Range Quality. OCOG Altimeter Range. SSHA, SWH and Backscatter Quality.       The OCCG Altimeter Range and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T130013_20210816T132833_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.       The OCean Altimeter Range. SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality.       The Ocean Altimeter Range. SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T134552_20210816T143138_C001       Ocean Altimeter Range. SSHA, SWH and Backscatter Quality.       The Ocean Altimeter Range. SSHA, SWH and Backscatter Quality.         CS_OFFL_SIR_GOPM_2_20210816T134552_20210816T1443138_C001       Ocean Altimeter Range and	
CS_OFFL_SIR_GOPM_2_20210816T120651_20210816T120733_C001       and Backscatter Quality, OCOG       and the OCOG Alimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T122708_20210816T125235_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range and Backscatter Quality, OCOG         CS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       OCOG Altimeter Range Quality, OCOG       The Ocean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T130013_20210816T130559_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The OcoG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T134552_20210816T143138_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T143909_20210816T144313_C001       Ocean Altimeter Range and Backscatter Quality       The OCean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Altimeter Range and Backscatter Quality       The OCean Altimeter Range and Backscatter Quality <t< td=""><td></td></t<>	
CS_OFFL_SIR_GOPM_2_20210816T122708_20210816T125235_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T130001_20210816T130559_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, oCOG Altimeter Range, SSHA, SWH and Backscatter Quality, oCOG Al	
CS_OFFL_SIR_GOPM_2_202108161130001_202108161130339_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T135852_20210816T143138_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T143099_20210816T144431_C001       Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality ast for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T144431_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality ast for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or	
CS_OFFL_SIR_GOPM_2_20210816T130913_20210816T132833_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T135852_20210816T143138_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T143909_20210816T144431_C001       OCCGG Altimeter Range Quality, OCOG       The OCCG Altimeter Range and Backscatter Quality If         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       OCCGG Altimeter Range, SSHA, SWH       The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality If         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       OCCGG Altimeter Range, SSHA, SWH and Backscatter Quality       Fhe OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145262_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T1452621_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T14	Flags have been set
CS_OFFL_SIR_GOPM_2_20210816T134252_20210816T134708_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T135852_20210816T143138_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T143909_20210816T144431_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG 	
CS_OFFL_SIR_GOPM_2_20210816T135852_20210816T143138_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T143909_20210816T144431_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T144431_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, ocog and the OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20210816T152226_20210816T152621_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	
CS_OFFL_SIR_GOPM_2_20210016T143909_20210016T144431_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T152226_20210816T152621_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality ast for one or more records.	
CS_OFFL_SIR_GOPM_2_20210816T144818_20210816T145036_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality, set for one or more records.         CS_OFFL_SIR_GOPM_2_20210816T152226_20210816T152621_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	Flags have been set
CS_OFFL_SIR_GOPM_2_20210816T152226_20210816T152621_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Qua	
CS_OFFL_SIR_GOPM_2_20210816T153757_20210816T154714_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, set for one or more records. The Ocean Altimeter Range, SSHA, SWH The Oce	
CS_OFFL_SIR_GOPM_2_20210816T154959_20210816T161113_C001 Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	
CS_OFFL_SIR_GOPM_2_20210816T161919_20210816T162326_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality for one or more records.	Flags have been set
CS_OFFL_SIR_GOPM_2_20210816T162847_20210816T163831_C001 Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, set for one or more records.	
CS_OFFL_SIR_GOPM_2_20210816T164019_20210816T164620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, set for one or more records.	
CS_OFFL_SIR_GOPM_2_20210816T170309_20210816T170319_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, occog	catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T171456_20210816T174956_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, set for one or more records. The Ocean Altimeter Range, SSHA, SWH	
CS_OFFL_SIR_GOPM_2_20210816T175312_20210816T175812_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality for one or more records.	lity Flags have been catter Quality Flags
CS_OFFL_SIR_GOPM_2_20210816T175832_20210816T180145_C001 CCOG Altimeter Range Quality, OCOG Backscatter Quality CCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality The OCOG Altimeter Range and Backscatter Quality	lity Flags have been catter Quality Flags lity Flags have been
CS_OFFL_SIR_GOPM_2_20210816T180912_20210816T184043_C001 Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, ocoG Altimeter Range and Backscatter Quality set for one or more records.	lity Flags have been catter Quality Flags lity Flags have been Flags have been set
CS_OFFL_SIR_GOPM_2_20210816T184150_20210816T184312_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality I for one or more records.	lity Flags have been catter Quality Flags lity Flags have been Flags have been set Flags have been set catter Quality Flags

CS_OFFL_SIR_GOPM_2_20210816T184312_20210816T184506_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_20210816T185314_20210816T190757_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_20210816T191337_20210816T192927_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_20210816T193202_20210816T193711_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_20210816T194701_20210816T200054_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_20210816T200308_20210816T201915_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_20210816T204241_20210816T205258_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_20210816T205437_20210816T210812_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_20210816T211123_20210816T211623_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_20210816T212831_20210816T213921_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_20210816T214106_20210816T214647_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_20210816T214931_20210816T215859_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_20210816T222537_20210816T224626_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_20210816T225200_20210816T225541_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_20210816T230303_20210816T233044_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_20210816T024000_20210816T024103_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T054023_20210816T054103_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_20210816T070103_20210816T070106_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T153448_20210816T153757_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_20210816T202306_20210816T202402_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_20210816T023004_20210816T023143_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_20210816T085626_20210816T085818_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_20210816T170706_20210816T171456_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_20210816T202521_20210816T203215_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_20210816T202521_20210816T203215_C001 CS_OFFL_SIR_GOPR_2_20210816T220938_20210816T221038_C001		
	Backscatter Quality OCOG Altimeter Range Quality, OCOG	for one or more records. The OCOG Altimeter Range and Backscatter Quality Flags have been set

# L2 Quality Flags (20Hz PLRM)

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

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

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

80

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20210816T012859_20210816T013028_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_20210816T020858_20210816T021022_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T024000_20210816T024103_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_20210816T025904_20210816T030029_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_20210816T030553_20210816T030905_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_20210816T041449_20210816T041801_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_20210816T043841_20210816T043956_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T054023_20210816T054103_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_20210816T061929_20210816T062205_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Attimeter 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_GOPN_2_20210816T071903_20210816T072057_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T075448_20210816T080059_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T080812_20210816T080948_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_20210816T085404_20210816T085507_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_20210816T091619_20210816T092111_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_20210816T101817_20210816T101920_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_20210816T103318_20210816T103814_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T111951_20210816T112038_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_20210816T112532_20210816T112753_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T120807_20210816T120831_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T135538_20210816T135852_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_20210816T143551_20210816T143909_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T144431_20210816T144550_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 bee set for one or more records.
CS_OFFL_SIR_GOPN_2_20210816T150646_20210816T150830_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_20210816T151714_20210816T151746_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_20210816T151828_20210816T151909_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

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CS_OFFL_SIR_GOPN_2_20210816T152130_20210816T152226_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_20210816T161443_20210816T161804_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_20210816T162326_20210816T162451_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_20210816T164620_20210816T164823_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_20210816T170528_20210816T170706_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_20210816T193022_20210816T193201_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_20210816T202306_20210816T202402_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_20210816T202418_20210816T202521_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_20210816T204040_20210816T204241_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_20210816T213922_20210816T214106_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_20210816T215942_20210816T220349_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_20210816T222007_20210816T222401_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_20210816T225904_20210816T230106_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_20210816T235228_20210816T235343_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_20210816T001953_20210816T002138_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_20210816T011709_20210816T011912_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_20210816T013028_20210816T013317_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_20210816T013317_20210816T013347_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_20210816T020819_20210816T020857_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_20210816T021022_20210816T021824_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_20210816T022225_20210816T022339_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_20210816T025338_20210816T025904_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_20210816T030905_20210816T031258_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_20210816T034811_20210816T035546_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_20210816T043443_20210816T043841_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_20210816T044815_20210816T045202_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_20210816T061232_20210816T061929_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_20210816T084734_20210816T084907_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_20210816T093433_20210816T093700_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_20210816T102604_20210816T102708_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_20210816T104600_20210816T104821_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_20210816T112753_20210816T113028_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_20210816T120831_20210816T121340_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_20210816T122532_20210816T122604_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_20210816T125235_20210816T125601_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_20210816T130728_20210816T130913_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_20210816T134731_20210816T135538_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_20210816T143139_20210816T143551_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_20210816T144550_20210816T144818_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_20210816T151309_20210816T151711_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_20210816T152621_20210816T153448_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_20210816T161114_20210816T161443_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_20210816T162451_20210816T162846_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_20210816T170207_20210816T170309_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_20210816T170706_20210816T171456_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_20210816T180320_20210816T180602_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_20210816T180602_20210816T180912_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_20210816T193711_20210816T193718_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_0FFL_SIR_GOPR_2_20210816T194127_20210816T194701_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_20210816T200054_20210816T200308_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_20210816T202129_20210816T202306_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_20210816T202521_20210816T203215_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_20210816T224627_20210816T224907_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_20210816T230106_20210816T230302_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.

OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality

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

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

185

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138

> 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.

Number of products with errors:

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 Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

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

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

30

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20210815T234632_20210816T003611_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_20210816T003611_20210816T012546_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_20210816T012546_20210816T021526_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_2_20210816T021526_20210816T030501_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_20210816T030501_20210816T035440_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_20210816T035440_20210816T044416_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_20210816T044416_20210816T053355_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_20210816T053355_20210816T062330_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_20210816T062330_20210816T071310_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_20210816T071310_20210816T080245_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_2_20210816T080245_20210816T085224_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_20210816T085224_20210816T094200_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_220210816T094200_20210816T103139_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_220210816T103139_20210816T112114_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220210816T112114_20210816T121054_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_220210816T121054_20210816T130029_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perior Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220210816T130029_20210816T135008_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_220210816T135008_20210816T143944_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_220210816T143944_20210816T152923_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_220210816T152923_20210816T161858_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_220210816T161858_20210816T170838_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220210816T170838_20210816T175813_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_220210816T175813_20210816T184752_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_220210816T184752_20210816T193727_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_220210816T193727_20210816T202707_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_220210816T202707_20210816T211642_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_220210816T211642_20210816T220622_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_220210816T220622_20210816T225557_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_220210816T225557_20210816T234536_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_220210816T234536_20210817T003512_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

### 6.5 P2P Measurement Confidence Data Check

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

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### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220210816T103139_20210816T112114_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220210816T202707_20210816T211642_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.

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Number of products with errors:
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### 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. 27

# 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	150	150	1	149	0
SIR_GOPR1B	106	106	0	106	0
SIR_GOPN1B	95	95	2	93	0
SIR_GOPM_2	150	150	96	54	0
SIR_GOPR_2	106	106	32	73	1
SIR_GOPN_2	95	95	36	59	0
SIR_GOP_P2P	29	29	0	28	1

# 7.1 QCC Errors

					Total number	of occurrences	of each error				
Product Type RLC	BOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_GOPR_2	1	1	1	1							
Product Type RLC	BOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
		4	4	4							
SIR_GOP_2_	1	1	1	1							
SIR_GOP_2	1	1		I							
	1 9 <b>y:</b>	1	1								
Fest Description Ke	n by: Test na	me		Details							
Fest Description Ke	Test na	me titudeOrBlankOP			between -90E7 an	d 90E7					
Fest Description Ke Abbreviation RLOBOPNCDF	Test na	titudeOrBlankOP	_7NetCDF	Latitude should be	∮ e between -90E7 an e between -90E7 an						
Test Description Ke Abbreviation RLOBOPNCDF RL RLOBOPNCDF	Test na RangeLa RangeLa	titudeOrBlankOP	_7NetCDF	Latitude should be Latitude should be		d 90E7					

# 7.2 QCC Warnings

				ber of occurrences of ea			
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRM
SIR_GOPM1B	149	0	0	0	0	0	0
SIR_GOPM_2	0	0	42	45	0	45	0
SIR_GOPN1B	92	0	0	0	0	0	0
SIR_GOPN_2	0	0	9	32	5	22	25
SIR_GOPR1B	101	0	0	0	0	0	0
SIR_GOPR_2	0	1	41	42	1	37	31
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCI	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR GOPM 2	39	2	38	0	0	0	0
SIR GOPN1B	0	0	0	0	0	0	0
SIR GOPN 2	19	2	0	0	25	0	29
SIR GOPR1B	0	0	0	0	0	0	0
SIR GOPR 2	18	1	0	46	0	50	0
			-		-		-
Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	33	0	0	4	29	0	4
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	28	16	44	50	30
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	43	0	1	65	42	7
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF			SCSTODHRNCDF	SCSTODNCDF	-
SIR_GOPM1B	0	0	0	0	0	0	
SIR_GOPM_2	40	0	4	0	0	0	
SIR_GOPN1B	0	0	0	0	43	1	
SIR_GOPN_2	27	29	10	1	0	0	
SIR_GOPR1B	0	0	0	0	106	4	
SIR_GOPR_2	36	48	0	4	0	0	
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_GOP_2_	20	29	29	5	28	18	27
	RNELPOTONCDF	RPEPOPFDPLRMSINNCD			RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNC
Product Type					40	100	18
Product Type SIR_GOP_2_	4	19	29	24	16	29	10
	4 RSSHAONCDF	19 RSWHOEPFDNCDF		- <b>I</b>	SPHLPQWNCDF	29	10

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 latitude between -70 and 70 degrees
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) to surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	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

RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter
	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF RangeSeaSurfaceHeightAnomalyOceanNetCDF RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF RangeSignificantWaveHeightOceanExcludingPolarPD2PLRMNetCDF RangeSignificantWaveHeightOceanExcludingPolarNetCDF SameOrOneHigher1HzIndexFor20HzData SequenceCounterStepTODHRNetCDF

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

1

Product name

Product name CS\_OFFL\_SIR\_GOP\_2\_20210816T234536\_20210817T003512\_C002