

# QA4EO Daily Report for GOP data:

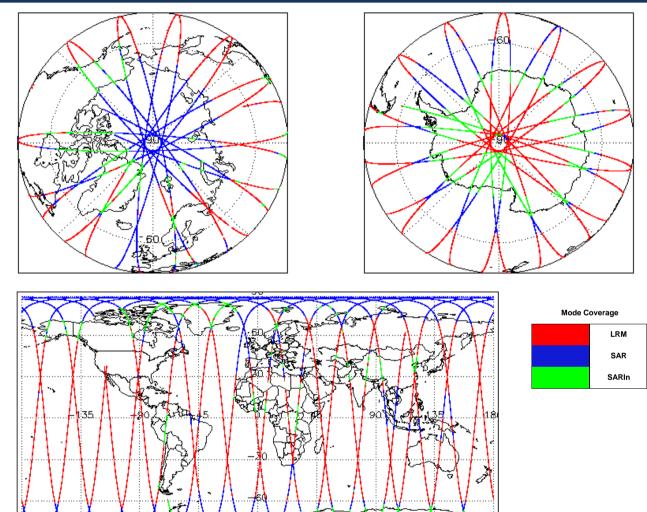
<u>19/06/2021</u>

port Production:	18-Aug-2021	Check	L1 & L2	P2P
report Production:	18-Aug-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:		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 Useu:	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 7.2	See Section 7.2

1. Overview

Mission / Instrument News		
18-Jun-2021	None	
19-Jun-2021	None	
20-Jun-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). Number of products with errors: 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 inconsist	encies and/or errors raised by the ground-segment processing chain.		
L1B Processing Quality HR: The 11b_proc_flag_hr flag is currently set all L1B GOPR and GOPN products because the 11b_processing_quality_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.				
Number of products with errors: 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 cheo	ck 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 ar	ny 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 measurem	ent record. The bit value of this flag in	ndicates any problems when set.		
Attitude Correction Missing: This flag is currently set in error for GOPR produ-	-			
Number of products with errors: 2				
Product	Test Failed	Description		
CS_OFFL_SIR_GOPM1B_20210619T173016_20210619T173549_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records		
CS_OFFL_SIR_GOPM1B_20210619T230713_20210619T231411_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 an	y problems when set.		
Loss of Echo Flag: This flag is currently set for some products over land, but the	is is to be expected.			
Number of products with errors: 18				
Product	Test Failed	Description		
CS_OFFL_SIR_GOPM1B_20210619T050626_20210619T050802_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPM1B_20210619T104508_20210619T105858_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPM1B_20210619T110216_20210619T111139_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T063156_20210619T063241_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T095308_20210619T095441_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T121145_20210619T121353_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T130759_20210619T131349_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T144252_20210619T144318_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T163016_20210619T163409_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T193945_20210619T194150_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPN1B_20210619T235251_20210619T235746_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPR1B_20210619T012856_20210619T013407_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS_OFFL_SIR_GOPR1B_20210619T044501_20210619T045231_C001	Loss of Echo	The tracking echo is missing for one or more records		
CS OFFL SIR GOPR1B 20210619T050447 20210619T050626 C001	Loss of Echo	The tracking echo is missing for one or more records		

# 5. GOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

## 5.1 L2 Product Format Check

CS\_OFFL\_SIR\_GOPR1B\_20210619T062229\_20210619T063034\_C001

CS\_OFFL\_SIR\_GOPR1B\_20210619T144318\_20210619T144815\_C001

CS\_OFFL\_SIR\_GOPR1B\_20210619T184634\_20210619T184938\_C001

CS\_OFFL\_SIR\_GOPR1B\_20210619T225528\_20210619T225754\_C001

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: 0

## 5.2 L2 Product Header Analysis

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

 Number of products with errors:
 0

Loss of Echo

Loss of Echo

Loss of Echo

Loss of Echo

## 5.3 L2 Auxiliary Data File Usage Check

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

 Number of products with errors:
 0

#### 5.4 L2 Auxiliary Correction Error Check

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

Currently, there are some common auxiliary correction errors raised in the Level 2 products 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.

54

Number of products with errors:

CS_OFFL_SIR_GOPM_2_20210619T113822_20210619T115103_C001         Mear Geoc           CS_OFFL_SIR_GOPM_2_20210619T215120_20210619T220436_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T003431_20210619T003652_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T004331_20210619T004753_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T012504_20210619T012856_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T013407_20210619T012856_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T013407_20210619T013441_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T021450_20210619T021723_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear	an Dynamic Topography (1) an Dynamic Topography (1), Total coentric Ocean Tide (GOT) an Dynamic Topography (1) an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic loography (1) an Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records
CS_OFFL_SIR_GOPM_2_202106191113622_202106191115103_C001         Mear           CS_OFFL_SIR_GOPM_2_202106191215120_202106191003652_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191003431_202106191003652_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191004331_202106191004753_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191012504_202106191012856_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191013407_202106191013441_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191021450_202106191021723_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191022446_202106191022629_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191053354_202106191053512_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191053354_202106191053512_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191054044_202106191054401_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191071318_202106191071432_C001         Mear	an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic oography (1) an Sea Surface (1), Mean Dynamic oography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	Total Geocentric Ocean Tide (solution 1: GOT) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records
CS_OFFL_SIR_GOPN_2_20210619T003431_20210619T003652_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T004331_20210619T004753_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T012504_20210619T012856_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T013407_20210619T013441_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T021450_20210619T021723_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T05354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001         Mear	an Dynamic Topography (1) an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic bography (1) an Sea Surface (1), Mean Dynamic bography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records
CS_OFFL_SIR_GOPN_2_20210619T004331_20210619T004753_C001         Mear Topo           CS_OFFL_SIR_GOPN_2_20210619T012504_20210619T012856_C001         Mear Topo           CS_OFFL_SIR_GOPN_2_20210619T013407_20210619T013441_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T021450_20210619T021723_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001         Mear	an Sea Surface (1), Mean Dynamic oography (1) an Sea Surface (1), Mean Dynamic oography (1) an Dynamic Topography (1)	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more more records
CS_OFFL_SIR_GOPN_2_202106191004331_202106191004753_C001         Topo           CS_OFFL_SIR_GOPN_2_20210619T012504_20210619T012856_C001         Mear           Topo         CS_OFFL_SIR_GOPN_2_20210619T013407_20210619T013441_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T021450_20210619T021723_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001         Mear	an Sea Surface (1), Mean Dynamic sography (1) an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic sography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_202106191012304_202106191012856_C001         Topo           CS_OFFL_SIR_GOPN_2_202106191013407_202106191012856_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191021450_202106191021723_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191022446_202106191022629_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191053354_202106191053512_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191053354_202106191053512_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191054044_202106191054401_C001         Mear           CS_OFFL_SIR_GOPN_2_202106191071318_202106191071432_C001         Mear	an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic bography (1) an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20210619T021450_20210619T021723_C001         Mear Topo           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001         Mear	an Dynamic Topography (1) an Sea Surface (1), Mean Dynamic ography (1) an Dynamic Topography (1) an Dynamic Topography (1)	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_202106191021450_202106191021723_C001         Topo           CS_OFFL_SIR_GOPN_2_20210619T022446_20210619T022629_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T053512_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001         Mear           CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001         Mear	an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	Topography height (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or
CS_OFFL_SIR_GOPN_2_20210619T053354_20210619T053512_C001 Mear CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001 Mear CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001 Mear Topo	an Dynamic Topography (1) an Dynamic Topography (1) an Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or
CS_OFFL_SIR_GOPN_2_20210619T054044_20210619T054401_C001 Mear CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001 Mear Topo	an Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography (solution 1) for one or
CS_OFFL_SIR_GOPN_2_20210619T071318_20210619T071432_C001	an Dynamic Topography (1)	
CS_OFFL_SIR_GOPN_2_2021061910/1318_2021061910/1432_C001	an Sea Surface (1), Mean Dynamic	
Mear	pography (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_20210619T071941_20210619T072256_C001	e (GOT), Total Geocentric Ocean Tide	I here 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 OFEL SID CODN 2 20210610T085414 20240610T085664 C004		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
	an Sea Surface (1), Mean Dynamic bography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
		There is 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_20210619T130759_20210619T131349_C001 Topo		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_20210619T140042_20210619T140313_C001 Mear		There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20210619T153040_20210619T153200_C001 Mear		There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20210619T163016_20210619T163409_C001 Mear		There is an error with the Mean Dynamic Topography (solution 1) for one o more records
		There is 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_20210619T171927_20210619T172043_C001 Mean		There is an error with the Mean Dynamic Topography (solution 1) for one o more records
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
		There is 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_20210619T203714_20210619T203824_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_20210619T211948_20210619T212055_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T221415_20210619T221613_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T225754_20210619T230010_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T235251_20210619T235746_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T012856_20210619T013407_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T030636_20210619T031419_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T044501_20210619T045231_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T050139_20210619T050335_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_20210619T062230_20210619T063034_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T063034_20210619T063156_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_20210619T063654_20210619T063932_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_20210619T080217_20210619T080934_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T080934_20210619T081350_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T094349_20210619T094826_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T094826_20210619T094934_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T102817_20210619T103255_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20210619T112201_20210619T112844_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T130122_20210619T130759_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T144318_20210619T144815_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T162022_20210619T163015_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T180103_20210619T180909_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T194150_20210619T194931_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T212055_20210619T212803_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T223541_20210619T223755_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20210619T230010_20210619T230125_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T230125_20210619T230712_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

# 5.5 L2 Measurement Confidence Data Check

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

2

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210619T173016_20210619T173549_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_20210619T230713_20210619T231411_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.

91

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20210619T001921_20210619T003349_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_20210619T003652_20210619T004140_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_20210619T004146_20210619T004158_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_20210619T004220_20210619T004331_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_20210619T004931_20210619T011512_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_20210619T014945_20210619T021020_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_20210619T021723_20210619T022056_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_20210619T022119_20210619T022446_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_20210619T022806_20210619T025444_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_20210619T032554_20210619T032811_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_20210619T032828_20210619T035243_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_20210619T035513_20210619T040011_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_20210619T040018_20210619T040347_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_20210619T040754_20210619T044152_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_20210619T045452_20210619T050032_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_20210619T053022_20210619T053139_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_20210619T053512_20210619T054043_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_20210619T054737_20210619T062229_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_20210619T063331_20210619T063505_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_20210619T064052_20210619T064102_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_20210619T065302_20210619T071008_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_20210619T071432_20210619T071941_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_20210619T072615_20210619T080217_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_20210619T082433_20210619T082903_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_20210619T082935_20210619T084715_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_20210619T090618_20210619T091857_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_20210619T092018_20210619T092308_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_20210619T092749_20210619T094215_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_20210619T095508_20210619T101215_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_20210619T101402_20210619T102817_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_20210619T103553_20210619T103757_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_20210619T103855_20210619T104259_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_20210619T104508_20210619T105858_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_20210619T110216_20210619T111139_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_20210619T112951_20210619T113048_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_20210619T113822_20210619T115103_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_20210619T115641_20210619T120451_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_20210619T120553_20210619T120912_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_20210619T121353_20210619T122203_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_20210619T122441_20210619T123955_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_20210619T131614_20210619T132242_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_20210619T132249_20210619T132649_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_20210619T132652_20210619T134911_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_20210619T135238_20210619T135444_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_20210619T135517_20210619T140042_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_20210619T140444_20210619T142833_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_20210619T150151_20210619T152758_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_20210619T153447_20210619T154050_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_20210619T154320_20210619T161033_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_20210619T161503_20210619T162022_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_20210619T163409_20210619T170637_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_20210619T171357_20210619T171926_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_20210619T172234_20210619T172717_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_20210619T175814_20210619T180103_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_20210619T181301_20210619T182340_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_20210619T182444_20210619T184634_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_20210619T185259_20210619T185403_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_20210619T185406_20210619T185815_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_20210619T190223_20210619T191955_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_20210619T193755_20210619T193806_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_20210619T195044_20210619T202456_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_20210619T202833_20210619T203301_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_20210619T203320_20210619T203714_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_20210619T204159_20210619T204315_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_20210619T204404_20210619T211527_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_20210619T211657_20210619T211948_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_20210619T212803_20210619T214239_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_20210619T215120_20210619T220436_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_20210619T220643_20210619T221201_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_20210619T221235_20210619T221414_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_20210619T222225_20210619T223541_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_20210619T223755_20210619T225120_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_20210619T225230_20210619T225429_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_20210619T231717_20210619T232741_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_20210619T232921_20210619T234326_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_20210619T234610_20210619T235113_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_20210619T235149_20210619T235251_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_20210619T014611_20210619T014906_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_20210619T045231_20210619T045253_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_20210619T065053_20210619T065302_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_20210619T130759_20210619T131349_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_20210619T181215_20210619T181301_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_20210619T045253_20210619T045452_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_20210619T072256_20210619T072615_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_20210619T080934_20210619T081350_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_20210619T152758_20210619T153039_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_20210619T185403_20210619T185406_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_20210619T195032_20210619T195044_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_20210619T221613_20210619T222225_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_20210619T230010_20210619T230125_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_20210619T234326_20210619T234421_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

# L2 Quality Flags (20Hz PLRM)

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

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

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

83

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Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20210619T004331_20210619T004753_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_20210619T014611_20210619T014906_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_20210619T021450_20210619T021723_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_20210619T035345_20210619T035513_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_20210619T044152_20210619T044308_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_20210619T051209_20210619T051348_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_20210619T051404_20210619T051738_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_20210619T054044_20210619T054401_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_20210619T063156_20210619T063241_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_20210619T063932_20210619T063949_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_20210619T065053_20210619T065302_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_20210619T071318_20210619T071432_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_20210619T071941_20210619T072256_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_20210619T085846_20210619T090426_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_20210619T104300_20210619T104437_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_20210619T111139_20210619T111406_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_20210619T113048_20210619T113151_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_20210619T115103_20210619T115640_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_20210619T122203_20210619T122351_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_20210619T124957_20210619T125243_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_20210619T130759_20210619T131349_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_20210619T140042_20210619T140313_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_20210619T143110_20210619T143217_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_20210619T143759_20210619T143805_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_20210619T143805_20210619T143835_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_20210619T153040_20210619T153200_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_20210619T154050_20210619T154213_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_20210619T163016_20210619T163409_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_20210619T171029_20210619T171357_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_20210619T180910_20210619T181126_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_20210619T191955_20210619T192322_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_20210619T202645_20210619T202833_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_20210619T211549_20210619T211657_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_20210619T220505_20210619T220643_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_20210619T221415_20210619T221613_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20210619T234422_20210619T234610_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20210619T001106_20210619T001921_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_20210619T004753_20210619T004931_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20210619T012856_20210619T013407_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_20210619T013441_20210619T013609_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_20210619T030636_20210619T031419_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_20210619T031443_20210619T031718_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_20210619T040526_20210619T040754_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_20210619T044501_20210619T045231_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_20210619T050139_20210619T050335_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_20210619T054401_20210619T054737_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_20210619T062230_20210619T063034_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_20210619T080217_20210619T080934_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_20210619T084715_20210619T085414_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_20210619T094349_20210619T094826_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_20210619T094826_20210619T094934_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20210619T102817_20210619T103255_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_20210619T104437_20210619T104508_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20210619T112201_20210619T112844_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	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_GOPR_2_20210619T124231_20210619T124655_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_20210619T130122_20210619T130759_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_20210619T140314_20210619T140444_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_20210619T143913_20210619T144125_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_20210619T154213_20210619T154320_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_20210619T162022_20210619T163015_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_20210619T172044_20210619T172234_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_20210619T174741_20210619T174917_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_20210619T175411_20210619T175658_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_20210619T180103_20210619T180909_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_20210619T181126_20210619T181215_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_20210619T182340_20210619T182444_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_20210619T184634_20210619T184938_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_20210619T185939_20210619T190223_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_20210619T192820_20210619T192836_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_20210619T193027_20210619T193347_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_20210619T193806_20210619T193945_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_20210619T202456_20210619T202645_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_20210619T203824_20210619T204159_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_20210619T212055_20210619T212803_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_20210619T221613_20210619T222225_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_20210619T223541_20210619T223755_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_20210619T225120_20210619T225230_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
L2 Quality Flags (1 Hz & 1Hz PLRM)		

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

> 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:

190

L2 Retracking Flags (20Hz)		
CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz mea	asurement record. The bit value of this flag indicat	es any problems when set.
Ocean Retracking Quality Flag: This flag is currently set for products over la	and and sea ice, but this is to be expected. The nu	mber of products with this error flag set is given below.
Number of products with errors: 57		
L2 Retracking Flags (20Hz, PLRM)		
CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz PLF	-	
Ocean Retracking Quality Flag (PLRM): This flag is currently set for produc	ts GOPR and GOPN products over sea ice, but th	is is to be expected.
Number of products with errors: 146		
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 (.HI	DR) and a NetCDF product file (.nc).
Number of products with errors: 0		
6.2 P2P Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH ar	nd SPH in order to identify any inconsistencies and	d/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 p	re-determined baseline and also to check the valid	lity of Auxiliary Data Files is correct.
Number of products with errors: 0		· · · ·
6.4 P2P Auxiliary Correction Error Check		
·		
For all products, the auxiliary corrections within the Geophysical Group are ch Currently, there are some common auxiliary correction errors raised in		o surface type. All common flags are summarised in the list below
followed by a table highlighting any additional issues which may arise fi		o surface type. An common hays are summarised in the list below,
> ECMWF Meteo Corrections: Currently the following corrections are not co and the U-Wind and V-Wind components of the ECMWF model wind vector. the table below.		
> Sea State Bias & Sea State Bias PLRM: The error value is currently set for	or products over sea ice, but this is to be expected	L
> Altimetric Wind Speed Error: The error value is currently set for products		
Number of products with errors: 30		
Product	Test Failed	Description
CS_OFFL_SIR_GOP_220210618T235223_20210619T004202_C002	Mean Dynamic Topography (1)	
		There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_GOP_220210619T004202_20210619T013137_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	
		more records There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_GOP_220210619T013137_20210619T022116_C001	Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_GOP_220210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_220210619T022116_20210619T031052_C001	Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_GOP_2_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001	Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_GOP_2_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is 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_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topography (1)	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is 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_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001 CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001	Topography (1)Mean Sea Surface (1), Mean Dynamic Topography (1)	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is 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_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001 CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T062921_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topography (1)	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is 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_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001 CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T071900_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T071900_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topograph	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records 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
CS_OFFL_SIR_GOP_2_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001 CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T052946_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T071900_C001 CS_OFFL_SIR_GOP_2_20210619T071900_20210619T080836_C001 CS_OFFL_SIR_GOP_2_20210619T071900_20210619T080836_C001 CS_OFFL_SIR_GOP_2_20210619T080836_20210619T085815_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topography (1), Total Geocentric Ocean         Tide (GOT), Total Geocentric Ocean         (FES). Non-Equilibrium Long Period         Mean Sea Surface (1), Mean Dynamic	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records 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. There is an err
CS_OFFL_SIR_GOP_2_20210619T013137_20210619T022116_C001 CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001 CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001 CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001 CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001 CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T062921_C001 CS_OFFL_SIR_GOP_2_20210619T062921_20210619T071900_C001 CS_OFFL_SIR_GOP_2_20210619T071900_20210619T080836_C001 CS_OFFL_SIR_GOP_2_20210619T080836_20210619T085815_C001 CS_OFFL_SIR_GOP_2_20210619T080836_20210619T085815_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topograph	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records 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 There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an erro
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CS_OFFL_SIR_GOP_220210619T004202_20210619T013137_C001         CS_OFFL_SIR_GOP_2_20210619T013137_20210619T022116_C001         CS_OFFL_SIR_GOP_2_20210619T022116_20210619T031052_C001         CS_OFFL_SIR_GOP_2_20210619T031052_20210619T040031_C001         CS_OFFL_SIR_GOP_2_20210619T040031_20210619T040031_C001         CS_OFFL_SIR_GOP_2_20210619T040031_20210619T045007_C001         CS_OFFL_SIR_GOP_2_20210619T045007_20210619T053946_C001         CS_OFFL_SIR_GOP_2_20210619T053946_20210619T062921_C001         CS_OFFL_SIR_GOP_2_20210619T071900_20210619T080836_C001         CS_OFFL_SIR_GOP_2_20210619T071900_20210619T080836_C001         CS_OFFL_SIR_GOP_2_20210619T080836_20210619T085815_C001         CS_OFFL_SIR_GOP_2_20210619T085815_20210619T094751_C001         CS_OFFL_SIR_GOP_2_20210619T085815_20210619T103730_C001         CS_OFFL_SIR_GOP_2_20210619T094751_20210619T112705_C001         CS_OFFL_SIR_GOP_2_20210619T103730_20210619T112705_C001         CS_OFFL_SIR_GOP_2_20210619T103730_20210619T112705_C001	Topography (1)         Mean Sea Surface (1), Mean Dynamic         Topograph	more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records 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 There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an erro

CS_OFFL_SIR_GOP_2_20210619T130620_20210619T135559_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_20210619T135559_20210619T144535_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T144535_20210619T153514_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T153514_20210619T162450_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T162450_20210619T171429_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T171429_20210619T180404_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_220210619T180404_20210619T185343_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T185343_20210619T194319_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T194319_20210619T203258_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T203258_20210619T212233_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T212233_20210619T221212_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_20210619T221212_20210619T230148_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_20210619T230148_20210619T235127_C001	Mean Sea Surface (1), Mean Dynamic Topography (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_220210619T235127_20210620T004103_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors: 2						
Product	Test Failed	Description				
CS_OFFL_SIR_GOP_220210619T171429_20210619T180404_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records				
CS_OFFL_SIR_GOP_220210619T230148_20210619T235127_C001	_OFFL_SIR_GOP_2_20210619T230148_20210619T235127_C001 Power scaling error There is an error in the scaling of the L2 waveform for one or mo					
6.6 P2P Measurement Quality Flag Check						
P2P Quality Flags (20Hz)						
CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.						
Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.						
Number of products with errors: 30						
P2P Quality Flags (20Hz PLRM)						
Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.						
Number of products with errors: 30						

#### 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.

30

26

30

#### Number of products with errors:

6.8 P2P Ocean Retracking Quality Check				
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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	162	162	4	158	0
SIR_GOPR1B	108	108	0	108	0
SIR_GOPN1B	100	100	5	95	0
SIR_GOPM_2	162	162	109	53	0
SIR_GOPR_2	108	108	26	82	0
SIR_GOPN_2	100	100	44	56	0

#### SIR\_GOP\_P2P 29 29 0 29 1 1

0

0

# 7.1 QCC Errors

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Number of QCC reports with errors:

# 7.2 QCC Warnings

				ber of occurrences of			
Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN	CD RBSZOPOEPNCDF
SIR_GOPM1B	158	0	0	0	0	0	0
SIR_GOPM_2	0	37	40	1	43	0	35
SIR_GOPN1B	95	0	0	0	0	0	0
SIR_GOPN_2	0	8	31	2	19	20	16
SIR_GOPR1B	104	0	0	0	0	0	0
SIR_GOPR_2	0	43	54	1	39	34	19
	÷	·	·			·	·
Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNC	DFRPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	2	34	0	0	0	0	30
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	0	26	0	31	0
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	3	0	55	0	62	0	0
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	0	3	28	0	2	32
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	27	14	34	48	26	26
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	55	0	2	68	44	9	44
Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-
SIR_GOPM1B	0	0	0	0	0		
SIR_GOPM_2	0	5	0	0	0		
SIR_GOPN1B	0	0	0	46	2		
SIR_GOPN_2	25	11	2	0	0		
SIR_GOPR1B	0	0	0	108	4		
SIR_GOPR_2	55	3	3	0	0		
Product Type	IOHHMOOR		MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN	
SIR_GOP_2_	14	29	28	4	29	16	29
Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCDF		RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNC
SIR GOP 2	3		28	25	16	29	18
SIN_GOP_2_	3	10	20	20	10	29	10
	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
Product Type							

Test Description Key:				
Abbreviation	Test name	Details		
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter		
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degre		
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees		
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only		
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean		
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPFDPLRMSAR	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean		
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean		
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean		
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean		
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees		
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample		
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter		
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter		

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0