

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

22/10/2021

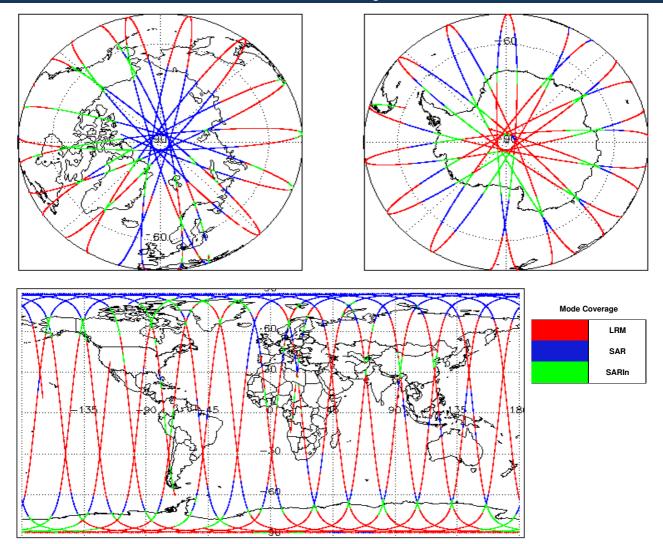
Report Production:	22-Nov-2021	Check	L1 & L2	P2P
heport Froduction.	22-1100-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor used:	GryoSal Ocean Frocesson	Product Software Check	Nominal	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	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

1. Overview

#### Mission / Instrument News 21-Oct-2021 None 22-Oct-2021 None

23-Oct-2021 Nothing planned

2. Global Coverage



## 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

## 4. GOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

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

Number of products with errors:

4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and		
LTB Processing Quality HR: The IIb_proc_flag_hr flag is currently set all LTE DSARIn chains. A modification is required in the next release.	B GOPR and GOPN products beca	ause the I1b_processing_quality_hr field is not correctly configured in the OSAR and
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	e-determined baseline and also to	check the validity of Auxiliary Data Files is correct.
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag for each measurement record	d. The bit value of this flag indicate	es any problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measurem	nent record. The bit value of this fla	ag indicates any problems when set.
Attitude Correction Missing: This flag is currently set in error for GOPR prod	lucts due to a configuration issue.	This is being investigated and will be updated in the next SW update.
lumber of products with errors: 0		
4.6 L1B Waveform Group Data Check		
4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement record	I. The bit value of this flag indicate	s any problems when set.
•	-	s any problems when set.
ryoSat L1B data includes a waveform data flag for each measurement record	-	s any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19	-	s any problems when set.  Description
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product	this is to be expected.	
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product ES_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001	this is to be expected.	Description
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product SS_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 CS_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001	this is to be expected. Test Failed Loss of Echo	Description           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product CS_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 CS_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001 CS_OFFL_SIR_GOPM1B_20211022T115025_20211022T115327_C001	this is to be expected. Test Failed Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product CS_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 CS_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001 CS_OFFL_SIR_GOPM1B_20211022T115025_20211022T16327_C001 CS_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001	Test Failed       Loss of Echo       Loss of Echo       Loss of Echo	Description           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
CryoSat L1B data includes a waveform data flag for each measurement record coss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors: 19 Product S_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 S_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001 S_OFFL_SIR_GOPM1B_20211022T115025_20211022T115327_C001 S_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001 S_OFFL_SIR_GOPN1B_20211022T02415_20211022T002508_C001	Test Failed         Loss of Echo	Description           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           The tracking echo is missing for one or more records
OryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           Cross of Echo Flag: This flag is currently set for some products over land, but           Iumber of products with errors:         19           Product         19           Construct         19           Product         19           ScoFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           ScoFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           ScoFFL_SIR_GOPM1B_20211022T115025_20211022T15327_C001           ScoFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001           ScoFFL_SIR_GOPM1B_20211022T002415_20211022T06458_C001           ScoFFL_SIR_GOPN1B_20211022T034151_20211022T034312_C001	Test Failed         Loss of Echo	Description           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           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
CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           Coss of Echo Flag: This flag is currently set for some products over land, but           Iumber of products with errors:         19           Product         19           ScOFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           Sc_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           Sc_OFFL_SIR_GOPM1B_20211022T115025_20211022T115327_C001           Sc_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001           Sc_OFFL_SIR_GOPN1B_20211022T002415_20211022T002508_C001           Sc_OFFL_SIR_GOPN1B_20211022T034151_20211022T034312_C001           Sc_OFFL_SIR_GOPN1B_20211022T032103_2021022T034312_C001           Sc_OFFL_SIR_GOPN1B_20211022T052103_2021022T052210_C001	Test Failed         Loss of Echo	Description           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           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           The tracking echo is missing for one or more records
invoSat L1B data includes a waveform data flag for each measurement record           oss of Echo Flag: This flag is currently set for some products over land, but           lumber of products with errors:         19           roduct         19           S_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           S_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           S_OFFL_SIR_GOPM1B_20211022T15025_20211022T15327_C001           S_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001           S_OFFL_SIR_GOPN1B_20211022T062415_20211022T02508_C001           S_OFFL_SIR_GOPN1B_20211022T034151_20211022T034312_C001           S_OFFL_SIR_GOPN1B_20211022T052103_20211022T052210_C001           S_OFFL_SIR_GOPN1B_20211022T052103_20211022T050604_C001	Test Failed         Loss of Echo	Description           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           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           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
ryoSat L1B data includes a waveform data flag for each measurement record oss of Echo Flag: This flag is currently set for some products over land, but umber of products with errors: 19 roduct S_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 S_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001 S_OFFL_SIR_GOPM1B_20211022T15025_20211022T15327_C001 S_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001 S_OFFL_SIR_GOPM1B_20211022T02415_20211022T02508_C001 S_OFFL_SIR_GOPN1B_20211022T034151_20211022T034312_C001 S_OFFL_SIR_GOPN1B_20211022T052103_20211022T052210_C001 S_OFFL_SIR_GOPN1B_20211022T070017_20211022T070604_C001 S_OFFL_SIR_GOPN1B_20211022T133137_20211022T133409_C001	Test Failed         Test Failed         Loss of Echo	Description           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           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           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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement record oss of Echo Flag: This flag is currently set for some products over land, but umber of products with errors: 19 roduct S_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001 S_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001 S_OFFL_SIR_GOPM1B_20211022T10525_20211022T054323_C001 S_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001 S_OFFL_SIR_GOPM1B_20211022T03415_20211022T00508_C001 S_OFFL_SIR_GOPN1B_20211022T034151_20211022T034312_C001 S_OFFL_SIR_GOPN1B_20211022T052103_20211022T052210_C001 S_OFFL_SIR_GOPN1B_20211022T00017_20211022T0604_C001 S_OFFL_SIR_GOPN1B_20211022T133137_20211022T133409_C001 S_OFFL_SIR_GOPN1B_20211022T164725_20211022T164755_C001	Test Failed         Loss of Echo	Description           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           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           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           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
invoSat L1B data includes a waveform data flag for each measurement record           oss of Echo Flag: This flag is currently set for some products over land, but           tumber of products with errors:         19           roduct         19           S_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           S_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           S_OFFL_SIR_GOPM1B_20211022T15025_20211022T15327_C001           S_OFFL_SIR_GOPM1B_20211022T163207_20211022T164725_C001           S_OFFL_SIR_GOPN1B_20211022T00415_20211022T034312_C001           S_OFFL_SIR_GOPN1B_20211022T052103_20211022T052210_C001           S_OFFL_SIR_GOPN1B_20211022T070017_20211022T0604_C001           S_OFFL_SIR_GOPN1B_20211022T07017_20211022T034309_C001           S_OFFL_SIR_GOPN1B_20211022T164725_20211022T133409_C001           S_OFFL_SIR_GOPN1B_20211022T164725_20211022T164755_C001           S_OFFL_SIR_GOPN1B_20211022T164725_20211022T183102_C001	Test Failed         Loss of Echo         Loss of Echo	Description           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           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           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           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           The tracking echo is missing for one or more records
invoSat L1B data includes a waveform data flag for each measurement record oss of Echo Flag: This flag is currently set for some products over land, but lumber of products with errors:         19           invoBer of products with errors:         19           is_OFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           Is_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           is_OFFL_SIR_GOPM1B_20211022T052629_20211022T054323_C001           is_OFFL_SIR_GOPM1B_20211022T01525_20211022T054323_C001           is_OFFL_SIR_GOPM1B_20211022T016207_20211022T064725_C001           is_OFFL_SIR_GOPN1B_20211022T002415_20211022T06208_C001           is_OFFL_SIR_GOPN1B_20211022T052103_20211022T05208_C001           is_OFFL_SIR_GOPN1B_20211022T052103_2021022T05210_C001           is_OFFL_SIR_GOPN1B_20211022T070017_20211022T070604_C001           is_OFFL_SIR_GOPN1B_20211022T133137_20211022T133409_C001           is_OFFL_SIR_GOPN1B_20211022T182551_20211022T183102_C001           is_OFFL_SIR_GOPN1B_20211022T182551_20211022T183102_C001	Test Failed         Loss of Echo         Loss of Echo	Description           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           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           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           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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           CryoSat L1B data includes a waveform data flag for each measurement record           Iumber of products with errors:         19           Product         19           ScOFFL_SIR_GOPM1B_20211022T040629_20211022T042047_C001           SS_OFFL_SIR_GOPM1B_20211022T1052629_20211022T054323_C001           SS_OFFL_SIR_GOPM1B_20211022T1022T163207_20211022T104725_C001           SS_OFFL_SIR_GOPN1B_20211022T002415_20211022T004312_C001           SS_OFFL_SIR_GOPN1B_20211022T070017_20211022T070604_C001           SS_OFFL_SIR_GOPN1B_20211022T1070017_20211022T133409_C001           SS_OFFL_SIR_GOPN1B_20211022T133137_20211022T133409_C001           SS_OFFL_SIR_GOPN1B_20211022T1214155_20211022T164755_C001           SS_OFFL_SIR_GOPN1B_20211022T1212551_20211022T164750_C001           SS_OFFL_SIR_GOPN1B_20211022T214155_20211022T214619_C001           SS_OFFL_SIR_GOPN1B_20211022T234444_20211022T234603_C001	Test Failed         Loss of Echo         Loss of Echo	Description           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record	Test Failed         Test Failed         Loss of Echo         Loss of Echo	Description           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

Loss of Echo

Loss of Echo

Loss of Echo

#### 5.1 L2 Product Format Check

CS\_OFFL\_SIR\_GOPR1B\_20211022T151312\_20211022T152023\_C001

CS\_OFFL\_SIR\_GOPR1B\_20211022T160833\_20211022T161436\_C001

CS\_OFFL\_SIR\_GOPR1B\_20211022T183102\_20211022T183626\_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

## 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.

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Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20211022T163207_20211022T164725_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20211022T002415_20211022T002508_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_20211022T010541_20211022T010655_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_20211022T011201_20211022T011517_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20211022T024636_20211022T024913_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_20211022T025106_20211022T025651_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_20211022T034151_20211022T034312_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_20211022T042455_20211022T042812_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_20211022T052103_20211022T052210_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_20211022T060409_20211022T060610_C001		There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20211022T070017_20211022T070604_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20211022T074342_20211022T074500_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_20211022T075257_20211022T075533_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_20211022T092302_20211022T092423_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_20211022T093313_20211022T093437_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_20211022T110252_20211022T110618_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_20211022T120133_20211022T120404_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_20211022T124157_20211022T124518_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_20211022T125035_20211022T125158_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_20211022T133137_20211022T133409_C001		There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20211022T142924_20211022T143043_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_20211022T151207_20211022T151312_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_20211022T160633_20211022T160833_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_20211022T165011_20211022T165227_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_20211022T182551_20211022T183102_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_20211022T192549_20211022T192808_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_20211022T200346_20211022T200926_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_20211022T214155_20211022T214619_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20211022T223521_20211022T223646_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_20211022T224443_20211022T224555_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_20211022T232356_20211022T232546_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_20211022T001506_20211022T002251_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_20211022T002251_20211022T002415_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_20211022T015500_20211022T020151_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_20211022T020151_20211022T020456_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_20211022T033440_20211022T034042_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_20211022T034042_20211022T034151_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_20211022T042310_20211022T042455_C001	Mean Sea Surface (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_20211022T051429_20211022T051621_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_20211022T051623_20211022T051807_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_20211022T051807_20211022T052103_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_20211022T065446_20211022T070017_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_20211022T083534_20211022T084036_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_20211022T101352_20211022T102237_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_20211022T115327_20211022T120133_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_20211022T133409_20211022T134147_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_20211022T151312_20211022T152023_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_20211022T165228_20211022T165858_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_20211022T183102_20211022T183626_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_20211022T183635_20211022T183739_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_20211022T200926_20211022T201826_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_20211022T201826_20211022T201851_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_20211022T214619_20211022T215403_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_20211022T232546_20211022T233224_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_20211022T233224_20211022T233427_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.
Number of products with errors:
0

## 5.6 L2 Measurement Quality Flag Check

## L2 Quality Flags (20Hz)

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

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

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

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

83

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20211021T234035_20211022T001506_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_20211022T002509_20211022T002731_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, 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.
	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_20211022T011900_20211022T015424_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_20211022T021654_20211022T023937_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_20211022T025848_20211022T031015_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_20211022T031136_20211022T031342_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_20211022T031352_20211022T031526_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_20211022T032007_20211022T033122_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_20211022T034312_20211022T034545_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_20211022T034703_20211022T040426_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_20211022T040629_20211022T042047_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_20211022T043112_20211022T043520_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_20211022T043745_20211022T045016_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_20211022T045433_20211022T050355_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_20211022T052456_20211022T052543_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_20211022T052629_20211022T054323_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_20211022T054852_20211022T060129_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_20211022T060610_20211022T061423_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_20211022T061741_20211022T063239_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_20211022T070604_20211022T071441_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_20211022T071521_20211022T074123_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_20211022T074741_20211022T075257_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_20211022T075750_20211022T082049_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_20211022T085325_20211022T091935_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_20211022T092708_20211022T093313_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_20211022T093635_20211022T100331_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_20211022T101107_20211022T101352_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_20211022T102621_20211022T105811_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_20211022T110618_20211022T111144_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_20211022T111558_20211022T111935_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T115025_20211022T115327_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T120516_20211022T121420_C001	Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T121705_20211022T123825_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T124626_20211022T125035_C001	Altimeter Range and Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality	set for one or more records. The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20211022T125602_20211022T131211_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T133013_20211022T133052_C001	Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T134257_20211022T141709_C001	Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20211022T143622_20211022T150804_C001	Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimater Range and Backscatter Quality	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20211022T152255_20211022T153500_C001	Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20211022T154237_20211022T155634_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_20211022T155904_20211022T160421_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_20211022T161436_20211022T162723_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_20211022T163207_20211022T164725_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20211022T170939_20211022T171813_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_20211022T172142_20211022T173517_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_20211022T173831_20211022T174333_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_20211022T175206_20211022T175314_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_20211022T180927_20211022T181352_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_20211022T181635_20211022T182223_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_20211022T184604_20211022T184658_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_20211022T185316_20211022T191346_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_20211022T191900_20211022T192250_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_20211022T192257_20211022T192305_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_20211022T193017_20211022T195700_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_20211022T202945_20211022T205314_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_20211022T205644_20211022T210205_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_20211022T210932_20211022T214155_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_20211022T215521_20211022T215634_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_20211022T215702_20211022T215733_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_20211022T220556_20211022T222505_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_20211022T222836_20211022T223234_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_20211022T223646_20211022T224443_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_20211022T225023_20211022T232154_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_20211022T235016_20211022T235158_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_20211022T003255_20211022T003417_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_20211022T043520_20211022T043656_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_20211022T052103_20211022T052210_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_20211022T064540_20211022T064614_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_20211022T155728_20211022T155903_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_20211022T160452_20211022T160455_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_20211022T174407_20211022T174410_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_20211022T182551_20211022T183102_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_20211022T202716_20211022T202718_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_20211022T223521_20211022T223646_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_20211022T234444_20211022T234603_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_20211022T042047_20211022T042207_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_20211022T045017_20211022T045135_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_20211022T071441_20211022T071521_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_20211022T113955_20211022T114330_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_20211022T155634_20211022T155727_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_20211022T183635_20211022T183739_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

## L2 Quality Flags (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.

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Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20211022T003255_20211022T003417_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_20211022T004251_20211022T004516_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_20211022T011201_20211022T011517_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_20211022T024636_20211022T024913_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_20211022T025106_20211022T025651_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_20211022T050355_20211022T050609_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_20211022T054324_20211022T054851_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_20211022T060409_20211022T060610_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_20211022T061423_20211022T061610_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_20211022T064112_20211022T064458_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_20211022T070017_20211022T070604_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_20211022T074342_20211022T074500_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_20211022T075257_20211022T075533_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_20211022T092302_20211022T092423_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_20211022T092516_20211022T092708_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_20211022T102237_20211022T102621_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_20211022T110252_20211022T110618_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_20211022T111145_20211022T111302_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_20211022T120133_20211022T120404_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_20211022T131211_20211022T131537_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_20211022T133137_20211022T133409_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_20211022T150804_20211022T150910_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_20211022T151207_20211022T151312_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_20211022T160633_20211022T160833_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_20211022T175314_20211022T175759_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_20211022T180435_20211022T180903_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_20211022T181352_20211022T181515_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_20211022T182223_20211022T182345_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_20211022T182551_20211022T183102_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_20211022T184658_20211022T185058_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_20211022T195746_20211022T195952_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_20211022T200346_20211022T200926_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_20211022T205519_20211022T205644_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_20211022T214155_20211022T214619_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_20211022T215403_20211022T215439_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_20211022T223521_20211022T223646_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_20211022T233800_20211022T233923_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_20211022T235158_20211022T235343_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_20211022T235633_20211022T235714_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_20211022T001506_20211022T002251_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_20211022T002937_20211022T003151_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_20211022T010114_20211022T010541_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_20211022T011517_20211022T011859_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_20211022T015500_20211022T020151_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_20211022T020151_20211022T020456_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_20211022T023937_20211022T024635_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_20211022T033440_20211022T034042_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_20211022T034042_20211022T034151_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_20211022T040426_20211022T040623_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_20211022T042310_20211022T042455_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_20211022T045233_20211022T045433_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_20211022T051429_20211022T051621_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_20211022T060129_20211022T060409_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.

In Proc.       Address States States       States and a states       States and a states         In Derry, Init BLOOM States       States and a states       States and a states       States and a states         Internet Intern		Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
city, ym, jm, oore, j. yer vestroering, periodition and ym, ym	CS_OFFL_SIR_GOPR_2_20211022T061610_20211022T061741_C001	PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_DEFL_SR_OPPL2_30211027110208_2011027110208_D011  Defl_SRS_OPPL2_30211027110208_2011027110208_D011  Defl_SRS_OPPL2_30211027110208_2011027110208_D011  Defl_SRS_OPPL2_30211027110208_2011027110208_D011  Defl_SRS_OPPL2_30211027110208_2011027110208_D011  Defl_SRS_OPPL2_30211027110208_2011027110285_D011  Defl_SRS_OPPL2_30211027110208_2011027110285_D011  Defl_SRS_OPPL2_30211027110208_2011027110285_D011  Defl_SRS_OPPL2_30211027110208_2011027110285_D011  Defl_SRS_OPPL2_30211027110208_2011027110285_D011  Defl_SRS_OPPL2_30211027110285_D01127110285_D011  Defl_SRS_OPPL2_30211027110308_2011027110385_D011  Defl_SRS_OPPL2_30211027110308_2011027110385_D011  Defl_SRS_OPPL2_30211027110308_2011027110385_D011  Defl_SRS_OPPL2_30211027110308_2011027110385_D011  Defl_SRS_OPPL2_30211027110385_D011  Defl_SRS_OPPL2_30211027110385_D01  Defl_SRS_OP	CS_OFFL_SIR_GOPR_2_20211022T063239_20211022T063511_C001	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.
CH       DHL SH: GOPH 2 82011021101123 2201102110125       DHL SH: SOUTH 2 82011021101123 2201102110125       DHL SH: SOUTH 2 82011021101123 2201102110125       DHL SH: SOUTH 2 82011021101123 2201102110125         CH, DHL SH: SOUTH 2 82011021101125 2201102110125       DHL SH: SOUTH 2 82011021101125 2201102110125       DHL SH: SOUTH 2 82011021101125       DHL SH: SOUTH 2 82011021101125       DHL SH: SOUTH 2 82011021101125       DHL SH: SOUTH 2 82011021101112       DHL SH: SOUTH 2 82011021101112       DHL SH: SOUTH 2 82011021101112       DHL SH: SOUTH 2 8201102110111112       DHL SH: SOUTH 2 820110211011112       DHL SH: SOUTH 2 8201102110111112       DHL SH: SOUTH 2 820110211011112       DHL SH: SOUTH 2 8201102110111111111111111111111111111	CS_OFFL_SIR_GOPR_2_20211022T065446_20211022T070017_C001	and Backscatter Quality PLRM, 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.
CG, GPH, SH, GOPP, 2, 201102710804, 201102711080, 2011027	CS_OFFL_SIR_GOPR_2_20211022T074123_20211022T074342_C001	and Backscatter Quality PLRM, 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.
GS OFFL BIR GOPR 2 02110027109403 S02110227103034 C001       Web device Color Mark Color Park S04 Color Mark	CS_OFFL_SIR_GOPR_2_20211022T083534_20211022T084036_C001	and Backscatter Quality PLRM, 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.
GB OFFL SIR GOFR 2. 2011027100187. 2021022110107. 0001         OCC Altineer Range Cauly PLUM. In the account of altip PLUM. DOCC Altineer Range Cauly PLUM. In the COC Range of Backstein Cauly Rage have been set for ner concerned.           OS. OFFL SIR GOFR 2. 20211027110182. 2021022110187. 0001         OCC Altineer Range Cauly PLUM. In the COC Range of Backstein Cauly Rage have been set for ner concerned.           OS. OFFL SIR GOFR 2. 20211027110182. 20210221110182. 0001         OCC Altineer Range Cauly PLUM. In the COC Range of Backstein Cauly Rage have been set for ner concerned.           OS. OFFL SIR GOFR 2. 202110271110182. 20210221110182. 0001         OCC Altineer Range Cauly PLUM. In the Coc Altineer Range Cauly	CS_OFFL_SIR_GOPR_2_20211022T091935_20211022T092302_C001	and Backscatter Quality PLRM, 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.
OCCUP_LSH_DMPL_20011022110008_02011022110005_0001         OCCOM Backaster Cashy Pillson         OPEN Hard Backaster Cashy Pillson           CS_OFFL_SIR_GOPR_2_0211022110315_0211022110350_0011         Cock Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The Occas Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_0211022110310_0011022110350_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The Occas Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_02110221110321_002110221110350_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The Occas Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_02110221110320_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The Occas Althreef Fange SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_0211027111032_0011021110310_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The OCCA Althreef Fange SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_0211027111040_0011027112010_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The OCCA Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context           CS_OFFL_SIR_GOPR_2_02011027112010_00111027112010_0011         Cocks Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context         The OCCA Althreef Fange_SIA, SVH and Backaster Cashy Pillson one context	CS_OFFL_SIR_GOPR_2_20211022T093437_20211022T093634_C001	and Backscatter Quality PLRM, 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_20211022T10235_20211022T10235_00211027T10352_0021 Belocating Calling FLBX_OCCOA Minime Frage SNA, SWH and Selecating Call	CS_OFFL_SIR_GOPR_2_20211022T100938_20211022T101107_C001		
GS_OFFL_SIR_GOPR_2_20211022T11302_0211022T111580_0001       Intel Backetatin Coulty FLMA.OCCO.       Intel Backetatin Coulty FLMA.OCCO.         GS_OFFL_SIR_GOPR_2_20211022T111302_0211022T111580_0001       Intel Backetatin Coulty FLMA.OCCO.       The OCCO Rames Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer at 0000 Adheren Resp. SNA. SWH and Backetatin Coulty Flags have beer to 00000 Adheren Resp. SNA. SWH and Backetatin Coult	CS_OFFL_SIR_GOPR_2_20211022T101352_20211022T102237_C001	and Backscatter Quality PLRM, 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, DFRL_SIR_GOPR_2_2021102T111002_0021102T111002_0021102T111508_0001         Ocean Attender Flange and Backscatter Custery Flags have been set for one or more necods.           CS, DFRL_SIR_GOPR_2_2021102T11102T111022_0021102T111030_0001         OCECAN Attender Flags and Backscatter Custery Flags have been set for one or more necods.           CS_OFFL_SIR_GOPR_2_2021102T111032_021102T112013_0001         OCECAN Attender Flags and Backscatter Custery Flags have been set for one or more necods.           CS_OFFL_SIR_GOPR_2_2021102T11202T121013_0001         OCECAN Attender Flags and Backscatter Custery Flags have been set for one or more necods.           CS_OFFL_SIR_GOPR_2_2021102T112102_0021102T121013_0001         OCECAN Attender Flags and Backscatter Custery Flags have been set for one or more necods.           CS_OFFL_SIR_GOPR_2_2021102T12120_0021102T121010_000         OCECAN Attender Flags and Backscatter Custery Flags have been set for one or more necods.           CS_OFFL_SIR_GOPR_2_2021102T121202_0021102T1210240_0021102T1212040_0021102T1212040_0021102T1210240_0021102T1210240_0021102T1210240_0021102T1210240_0021102T1210240_0021102T1120	CS_OFFL_SIR_GOPR_2_20211022T105811_20211022T110252_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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.
GS_OFFL_SIR_GOPR_2_20211022T114622_20211022T114605_0001     OCOG Allmeter Range Oxalily PLRM. OCOG Backstatter Quality PLRM. OCOG Backstatter Quality PLRM. OCOG Allmeter Range and Backstatter Quality Plags have been set for one more moods.       GS_OFFL_SIR_GOPR_2_20211022T112420_20211022T12746_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one more moods.       GS_OFFL_SIR_GOPR_2_20211022T121640_20211022T12746_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one plant       GS_OFFL_SIR_GOPR_2_20211022T121640_20211022T12746_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one plant       GS_OFFL_SIR_GOPR_2_20211022T121640_20211022T121680_2001     Decan Allmeter Range and Backstatter Quality Plags have been set for one or more records.       GS_OFFL_SIR_GOPR_2_20211022T12168_02211022T125602_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one or more records.       GS_OFFL_SIR_GOPR_2_20211022T1022T125602_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one or more records.       GS_OFFL_SIR_GOPR_2_20211022T1022T125602_001     Decan Allmeter Range and Backstatter Quality Plags have been set for one or more records.       GS_OFFL_SIR_GOPR_2_20211022T1022T1022T125602_001     Decan Allmeter Range SNA, SWH and Backstatter Quality PLRM_OCO Allmeter Range and Backstatter Quality Plags have been set for one more more records.       GS_OFFL_SIR_GOPR_2_20211022T1022T1022T1022T1022T1022T102	CS_OFFL_SIR_GOPR_2_20211022T111302_20211022T111558_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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_2021102711327_2011027112013_C001       and Backstatter Quality FLM_OCCQ       and Backstatter Quality FLM_OCCQ         GS_OFFL_SIR_GOPR_2_20211027112140_20211027112160_2001       and Backstatter Quality FLM_OCCQ       and Backstatter Quality FLM_OCCQ         GS_OFFL_SIR_GOPR_2_20211027112160_200110271121602_C001       Altereter Range ASH_A SWH       the Quality FLM_OCCQ         GS_OFFL_SIR_GOPR_2_20211027112160_200110271125602_C001       Altereter Range ASH_A SWH       the Quality FLM_OCCQ         GS_OFFL_SIR_GOPR_2_202110271125162_20110271125602_C001       COCCA Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         Altereter Range ASH_A SWH       and Backstatter Quality FLM_OCCQ       The Quase Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         CS_OFFL_SIR_GOPR_2_20211027113261_20211027113261_C001       COCCQ Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         QCCQA Barketer Guality FLM_OCCQ       The Quase Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ       The Quase Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ       The Quase Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ       The Quase Altereter Range ASH_A SWH and Backstatter Quality FLM_OCCQ         CS_OFFL_SIR_GOPR_2_20211027113240_2011027114362_20011       COCCA Altereter Range, SSH_A SWH and B	CS_OFFL_SIR_GOPR_2_20211022T114622_20211022T114905_C001		
GS_OFFL_SIR_GOPR_2_20211027121402_00211027112704_0001       and Backscatter Quality PLMX OGG       If the common control is a provide the common control is pro	CS_OFFL_SIR_GOPR_2_20211022T115327_20211022T120133_C001	and Backscatter Quality PLRM, 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.
GS_OFFL_SIR_GOPR_2_20211022T15518_20211022T152602_0001       and Backscatter Quality PLIM, QCOG Altimeter Range and Backscatter Quality PLIM, QCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T133409_20211022T134147_0001       CGCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T1452023_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T163031_20211022T163041_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T16303_0211022T16303_00110       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T16303_0211022T16303_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T163032_0211022T163035_0001       Ocean Altimeter Range, SSHA,	CS_OFFL_SIR_GOPR_2_20211022T121420_20211022T121704_C001	and Backscatter Quality PLRM, 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.
OCCG Backscatter Quality       or more records.         OCCG Backscatter Quality PLRN, OCCG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one row row records.         CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_C001       Cocean Alimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one row records.         CS_OFFL_SIR_GOPR_2_20211022T151312_20211022T152023_C001       Cocean Alimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCCG Alimeter Range, SSHA, SWH and Backscatter Quality Flags, Flags bet for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T153500_20211022T153941_C001       Cocean Alimeter Range, SSHA, SWH and Backscatter Quality Flags Alimeter Range and Backscatter Quality Flags and the OCCG Alimeter Range, SSHA, SWH and Backscatter Quality Flags for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001       Cocean Alimeter Range, SSHA, SWH and Backscatter Quality Flags Alimeter Range and Backscatter Quality Flags and the OCCG Alimeter Range and Backscatter Quality Flags and the OCCGA Alimeter	CS_OFFL_SIR_GOPR_2_20211022T125158_20211022T125602_C001	and Backscatter Quality PLRM, 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_20211022T133409_20211022T134147_C001       and Backscatter Quality FLRM       The OCean Altimeter Range and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_C001       Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T151312_20211022T15322_C001         CS_OFFL_SIR_GOPR_2_20211022T151312_20211022T153023_C001       Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T15300_20211022T153941_C001         CS_OFFL_SIR_GOPR_2_20211022T15302_0211022T153941_C001       Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T153500_20211022T153941_C001         CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T163941_C001       Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001         CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001       Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T1615356_C001         CS_OFFL_SIR_GOPR_2_20211022T16528_20211022T165588_C001       OCCGA Altimeter Range and Backscatter Quality FLRM       CS_OFFL_SIR_GOPR_2_20211022T165588_C001         CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001       OCCGA Altimeter Range and Backscatter Quality FLRM       The OCCGA Range and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_20211022T181535_C001       OCCGA Altimeter Range and Backscatter Quality FLRM       The OCCGA Range and Backscatter Quality FLRM       The OCCGA Range and Backscatter Quality FLRM       The OCCGA Range and Backscatter Quality FL	CS_OFFL_SIR_GOPR_2_20211022T132245_20211022T132611_C001		
CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_C001       and Backscatter Quality Flags and backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and be COGA Altimeter Range, SSHA, SWH and Ba	CS_OFFL_SIR_GOPR_2_20211022T133409_20211022T134147_C001	and Backscatter Quality PLRM, 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_20211022T151312_20211022T15303_C001       and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T153500_20211022T153941_C001       and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001       Ocean Altimeter Range and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T1610833_20211022T161436_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T1610833_20211022T163013_C001       OCOG Altimeter Range Quality PLM, OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T165228_20211022T163013_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T165228_20211022T165858_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T181635_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T181635_C001       Cean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T183626_C001 <td>CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_C001</td> <td>and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality</td> <td>The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.</td>	CS_OFFL_SIR_GOPR_2_20211022T143043_20211022T143622_C001	and Backscatter Quality PLRM, 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_20211022T153500_20211022T153941_C001       and Backscatter Quality PLRM_OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T162759_20211022T163013_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM_OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM_OCOG Attimeter Range and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183626_C001       Ocean Attimeter Range and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags and the OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality P	CS_OFFL_SIR_GOPR_2_20211022T151312_20211022T152023_C001	and Backscatter Quality PLRM, 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_20211022T160833_20211022T161436_C001       and Backscatter Quality PLRM, OCOG Atimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T162759_20211022T163013_C001       OCOG Attimeter Range Quality PLRM, COCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T165228_20211022T165858_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T18515_20211022T18655_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags and t	CS_OFFL_SIR_GOPR_2_20211022T153500_20211022T153941_C001	and Backscatter Quality PLRM, 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_20211022T182739_20211022T183013_C001       OCOG Backscatter Quality       or more records.         CS_OFFL_SIR_GOPR_2_20211022T165228_20211022T165858_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, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have bee set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183739_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20211022T160833_20211022T161436_C001	and Backscatter Quality PLRM, 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_20211022T165228_20211022T165858_C001       and Backscatter Quality PLRM, OCOG       Attimeter Range and Backscatter Quality PLRM, OCOG         CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001       Cean Altimeter Range, SSHA, SWH       The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001       Cean Altimeter Range, SSHA, SWH       The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001       Cean Altimeter Range, SSHA, SWH       The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183635_20211022T183739_C001       COCG Altimeter Range Quality PLRM, OCOG       The OCGA Altimeter Range and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183739_C001       OCOG Altimeter Range Quality PLRM, OCOG       The OCGA Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20211022T162759_20211022T163013_C001		
CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001       and Backscatter Quality PLRM, OCOG       The OCGan Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001       Cean Altimeter Range, SSHA, SWH       The OCGan Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001       Cean Altimeter Range, SSHA, SWH       The OCGan Altimeter Range, SSHA, SWH and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183739_C001       OCOG Altimeter Range Quality PLRM, OCOG       The OCGa Altimeter Range and Backscatter Quality Flags         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183739_C001       OCOG Altimeter Range Quality PLRM, OCOG       The OCGG Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20211022T165228_20211022T165858_C001	and Backscatter Quality PLRM, 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_20211022T183102_20211022T183626_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20211022T183635_20211022T183739_C001       Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20211022T181515_20211022T181635_C001	and Backscatter Quality PLRM, 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.
OCOG Backscatter Quality or more records.	CS_OFFL_SIR_GOPR_2_20211022T183102_20211022T183626_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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_20211022T183635_20211022T183739_C001		
CS_OFFL_SIR_GOPR_2_20211022T185152_20211022T185316_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OC	CS_OFFL_SIR_GOPR_2_20211022T185152_20211022T185316_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_20211022T200926_20211022T201826_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_20211022T214619_20211022T215403_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_20211022T215734_20211022T215843_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_20211022T223235_20211022T223521_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_20211022T224556_20211022T225023_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20211022T232302_20211022T232356_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_20211022T232546_20211022T233224_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_20211022T233707_20211022T233800_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.

195

64

139

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

Number of products with errors:

## 5.8 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

#### L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors:

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

## 6.1 P2P Product Format Check

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

## 6.2 P2P Product Header Analysis

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

#### 6.3 P2P Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct. 0

Number of products with errors:

#### 6.4 P2P Auxiliary Correction Error Check

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

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

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

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

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

30

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20211021T233212_20211022T002147_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_2_20211022T002147_20211022T011127_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_2_20211022T011127_20211022T020102_C001	Tide (COT) Total Geocentric Ocean	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records

CS_OFFL_SIR_GOP_2_20211022T020102_20211022T025041_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_20211022T025041_20211022T034016_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_20211022T034016_20211022T042956_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_20211022T042956_20211022T051931_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_20211022T051931_20211022T060910_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_20211022T060910_20211022T065846_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_20211022T065846_20211022T074825_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_20211022T074825_20211022T083801_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_20211022T083801_20211022T092740_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_20211022T092740_20211022T101715_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_20211022T101715_20211022T110655_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_20211022T110655_20211022T115630_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_20211022T115630_20211022T124609_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_20211022T124609_20211022T133545_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2_20211022T133545_20211022T142524_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_20211022T142524_20211022T151459_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_20211022T151459_20211022T160439_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_20211022T160439_20211022T165414_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_20211022T165414_20211022T174353_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_20211022T174353_20211022T183329_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_20211022T183329_20211022T192308_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_20211022T192308_20211022T201243_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_20211022T201243_20211022T210223_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_20211022T210223_20211022T215158_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_20211022T215158_20211022T224138_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_20211022T224138_20211022T233113_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_20211022T233113_20211023T002052_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

## 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. 0

Number of products with errors:

6.6 P2P Measurement Quality Flag C	heck
P2P Quality Flags (20Hz)	
CryoSat P2P data includes Quality Flags for each 20 H	Iz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.
Since the P2P Quality Flags are copied directly from	m 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	m 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.

## 6.8 P2P Ocean Retracking Quality Check

## P2P Retracking Flags (20Hz)

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

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

30

29

30

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	178	178	8	170	0
SIR_GOPR1B	100	100	0	100	0
SIR_GOPN1B	101	101	1	100	0
SIR_GOPM_2	178	178	121	57	0
SIR_GOPR_2	100	100	26	72	2
SIR_GOPN_2	101	101	41	60	0
SIR_GOP_P2P	29	29	0	27	2

## 7.1 QCC Errors

E

C reports with e	rrors:	4								
			Total number of occurrences of each error							
RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
2	2	2	2							
RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
2	2	2	2							
	RLOBOPNCDF 2	2 2	RLOBOPNCDFRLRLOBOPNCDF222	RLOBOPNCDF         RL         RLOBOPNCDF         RL           2         2         2         2	RLOBOPNCDF         RL         RLOBOPNCDF         RL         -           2         2         2         2         2         -	RLOBOPNCDF         RL         RLOBOPNCDF         RL         -	Total number of occurrences of each error           RLOBOPNCDF         RL         -         -           2         2         2         2         -         -	RLOBOPNCDF         RL         RLOBOPNCDF         RL         -	Total number of occurrences of each error           RLOBOPNCDF         RL         C <td>Total number of occurrences of each error           RLOBOPNCDF         RL         -</td>	Total number of occurrences of each error           RLOBOPNCDF         RL         -

Test name	Details
RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7
RangeLatitude_7	Latitude should be between -90E7 and 90E7
RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7
RangeLongitude_7	Longitude should be between -180E7 and 180E7
	RangeLatitudeOrBlankOP_7NetCDF RangeLatitude_7 RangeLongitudeOrBlankOP_7NetCDF

## 7.2 QCC Warnings

Due duet Ture -	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	per of occurrences of e MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN
SIR GOPM1B	170		0	MVIDEPNCDF	MVIONCDF		RDSZUPUEPFDPLRMIN
-	0	0	41	44	0	0 43	0
SIR_GOPM_2	99	0		0	0	43 0	0
SIR_GOPN1B SIR GOPN 2	0	0	0 8	31	4	26	33
		0	0	0	0	0	0
SIR_GOPR1B	95 0	2	33	41	0	36	31
SIR_GOPR_2	0	2	33	41	U	30	31
Product Type	RBSZOPOEPNCDF	RDACONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNC	DIRPEPOPFDSARNCDF
SIR GOPM1B	0	0	0	0	0	0	0
SIR GOPM 2	34	0	1	37	0	0	0
SIR GOPN1B	0	0	0	0	0	0	0
SIR GOPN 2	24	1	0	0	0	26	0
SIR GOPR1B	0	0	0	0	0	0	0
SIR GOPR 2	18	0	0	0	47	0	51
	-	-	-	-		-	-
Product Type	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	34	0	0	10	26	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	36	0	0	25	18	43	51
SIR GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	0	45	0	1	62	37
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF
SIR_GOPM1B	0	0	0	0	1	0	0
SIR_GOPM_2	4	34	0	2	1	0	0
SIR_GOPN1B	0	0	0	0	0	0	48
SIR_GOPN_2	25	27	31	14	0	0	0
SIR_GOPR1B	0	0	0	0	0	0	100
SIR_GOPR_2	13	40	44	3	0	2	0
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	
SIR_GOP_2_	16	29	29	5	29	18	29
	RDACONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPEDSINNCDE	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
Product Type							
Product Type	1	1	18	29	24	22	29
Product Type SIR_GOP_2_	1	1	18	29	24	22	29
	1 RSSHAOFDPLRMNCDF	1 RSSHAONCDF	18 RSWHOEPFDNCDF	29 RSWHOEPFDPLRMNCD		22 SPHLPQWNCDF	-
SIR_GOP_2_	1	1 RSSHAONCDF 26	-	•			29 -
SIR_GOP_2_ Product Type SIR_GOP_2_	1 RSSHAOFDPLRMNCDR 19		RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD	FRSWHOEPNCDF	SPHLPQWNCDF	29 -
SIR_GOP_2_ Product Type SIR_GOP_2_ t Description Key	1 RSSHAOFDPLRMNCDF 19 :		RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD	FRSWHOEPNCDF	SPHLPQWNCDF	29  - 
SIR_GOP_2_ Product Type SIR_GOP_2_ t Description Key previation	1       RSSHAOFDPLRMNCDF       19       :       Test name	26	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD 19 Details	F RSWHOEPNCDF 14	SPHLPQWNCDF 29	29 -
SIR_GOP_2_ Product Type SIR_GOP_2_ t Description Key	1 RSSHAOFDPLRMNCDF 19 :	26	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD 19 Details	FRSWHOEPNCDF	SPHLPQWNCDF 29	29 
SIR_GOP_2_ Product Type SIR_GOP_2_ t Description Key previation	1       RSSHAOFDPLRMNCDF       19       :       Test name	26 etCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD 19 Details The burst counter should I	F RSWHOEPNCDF 14	SPHLPQWNCDF 29	-  -

MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude between -70 and 70 degrees
RDACONCDF	RangeDynamicAtmosphericCorrectionOceanNetCDF	#N/A
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) t 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
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMN	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
CDF RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
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