

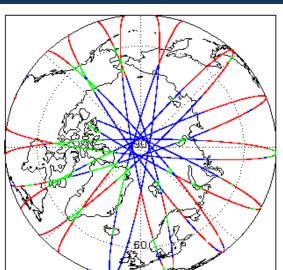
# **QA4EO Daily Report for GOP data:**

<u>19/08/2020</u>

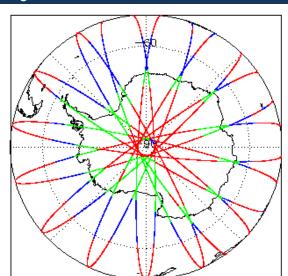
an art Draduction.	40.0 0000	Check	L1 & L2	P2P
Report Production:	18-Sep-2020	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	Oracio de la companya	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Used.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Usadu	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data	Product Format Check	Nominal	Nominal
Data Used:		Product Header Analysis	See Sections 4.2 and 5.2	See Section 6.2
		Auxiliary Data File Usage Check	See Section 4.3 and 5.3	See Section 6.3
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.

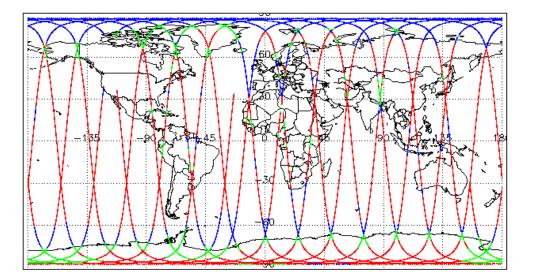
1. Overview

Mission / Instru	ment News
18-Aug-2020	None
19-Aug-2020	None
20-Aug-2020	Nothing planned













# 3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

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

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).

4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and	SPH in order to identify any inconsister	ncies and/or errors raised by the ground-segment processing chain.
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1E OSARIn chains. A modification is required in the next release.	GOPR and GOPN products because t	the I1b_processing_quality_hr field is not correctly configured in the OSAR an
Number of products with errors: 0		
4.3 L1B Auxilary Data File Usage Check		
Each product is checked for missing Data Set Descriptors with respect to a pre	-determined baseline and also to check	the validity of Auxiliary Data Files is correct.
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag for each measurement record	. The bit value of this flag indicates any	/ problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measurem	ent record. The bit value of this flag ind	licates any problems when set.
Attitude Correction Missing: This flag is currently set in error for GOPR prod	ucts due to a configuration issue. This is	s being investigated and will be updated in the next SW update.
Number of products with errors: 4		
Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20200819T015133_20200819T015332_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20200819T031404_20200819T031715_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20200819T155849_20200819T160940_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20200819T193840_20200819T194552_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
4.6 L1B Waveform Group Data Check		
•	. The bit value of this flag indicates any	problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record		problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record		problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15		problems when set. Description
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product	this is to be expected.	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001	this is to be expected.	Description
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001 CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_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 Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001 CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001 CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_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
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001 CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T0132559_C001 CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001 CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001	this is to be expected.           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 Loss of Echo Flag: This flag is currently set for some products over land, but Number of products with errors: 15 Product CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001 CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001 CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001 CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001 CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001         CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         15           CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001         15           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         15           CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001         15           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         15           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001         15           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093706_C001         15	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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T0132559_C001           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001         CS_OFFL_SIR_GOPN1B_20200819T094635_20200819T094706_C001           CS_OFFL_SIR_GOPN1B_20200819T093415_20200819T094706_C001         CS_OFFL_SIR_GOPN1B_20200819T093415_20200819T094706_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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001           CS_OFFL_SIR_GOPN1B_20200819T094635_20200819T094706_C001         CS_OFFL_SIR_GOPN1B_20200819T111423_20200819T111707_C001           CS_OFFL_SIR_GOPN1B_20200819T1111423_2020819T111704_C001         CS_OFFL_SIR_GOPN1B_20200819T11170_20200819T11174_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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T012559_C001           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001           CS_OFFL_SIR_GOPN1B_20200819T093635_20200819T094706_C001         CS_OFFL_SIR_GOPN1B_20200819T111423_20200819T111707_C001           CS_OFFL_SIR_GOPN1B_20200819T111710_20200819T111744_C001         CS_OFFL_SIR_GOPN1B_20200819T1125032_20200819T1125207_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
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001           CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T013259_C001         CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001           CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001         CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001         CS_OFFL_SIR_GOPN1B_20200819T094635_20200819T093740_C001           CS_OFFL_SIR_GOPN1B_20200819T094635_20200819T093740_C001         CS_OFFL_SIR_GOPN1B_20200819T1094635_20200819T1094706_C001           CS_OFFL_SIR_GOPN1B_20200819T1094635_20200819T1094706_C001         CS_OFFL_SIR_GOPN1B_20200819T111742_20020819T111707_C001           CS_OFFL_SIR_GOPN1B_20200819T111710_20200819T11174_C001         CS_OFFL_SIR_GOPN1B_20200819T1125032_20200819T1125207_C001           CS_OFFL_SIR_GOPN1B_20200819T142944_20200819T143244_C001         CS_OFFL_SIR_GOPN1B_20200819T142944_20200819T143244_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           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         15           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         CS_OFFL_SIR_GOPN1B_20200819T012520_20200819T013259_C001           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093242_C001           CS_OFFL_SIR_GOPN1B_20200819T094635_20200819T093242_C001         CS_OFFL_SIR_GOPN1B_20200819T111423_20200819T111707_C001           CS_OFFL_SIR_GOPN1B_20200819T111710_20200819T111744_C001         CS_OFFL_SIR_GOPN1B_20200819T1125032_20200819T1125207_C001           CS_OFFL_SIR_GOPN1B_20200819T142944_20200819T143244_C001         CS_OFFL_SIR_GOPN1B_20200819T142944_20200819T143244_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
4.6 L1B Waveform Group Data Check           CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for some products over land, but           Number of products with errors:         15           Product         0           CS_OFFL_SIR_GOPM1B_20200819T004832_20200819T005740_C001         0           CS_OFFL_SIR_GOPM1B_20200819T012520_20200819T012559_C001         0           CS_OFFL_SIR_GOPN1B_20200819T013002_20200819T013211_C001         0           CS_OFFL_SIR_GOPN1B_20200819T061609_20200819T061707_C001         0           CS_OFFL_SIR_GOPN1B_20200819T062426_20200819T062538_C001         0           CS_OFFL_SIR_GOPN1B_20200819T093115_20200819T093422_C001         0           CS_OFFL_SIR_GOPN1B_20200819T1094635_20200819T093422_C001         0           CS_OFFL_SIR_GOPN1B_20200819T11423_20200819T111707_C001         0           CS_OFFL_SIR_GOPN1B_20200819T111702_000819T111744_C001         0           CS_OFFL_SIR_GOPN1B_20200819T1425032_20200819T143244_C001         0           CS_OFFL_SIR_GOPN1B_20200819T142944_20200819T143244_C001         0           CS_OFFL_SIR_GOPN1B_20200819T143344_20200819T143558_C001         0           CS_OFFL_SIR_GOPN1B_20200819T143344_20200819T143558_C001         0           CS_OFFL_SIR_GOPN1B_20200819T143344_20200819T143558_C001         0	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records

# 5. GOP Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

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

Number of products with errors:

#### 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 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 Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

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

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

54

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20200819T044851_20200819T050219_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_GOPM_2_20200819T132343_20200819T132356_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20200819T141350_20200819T142943_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_20200819T003013_20200819T003248_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_20200819T012520_20200819T012559_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_20200819T020540_20200819T021136_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_20200819T021852_20200819T022030_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_20200819T030446_20200819T030658_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_20200819T030827_20200819T031050_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_20200819T035801_20200819T035958_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_20200819T044400_20200819T044850_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_20200819T062426_20200819T062538_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_20200819T070819_20200819T071045_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	Inere is an error with the MSS height (solution 1) and the Mean Uynamic 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_20200819T084640_20200819T084952_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_20200819T102456_20200819T102838_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_20200819T103409_20200819T103534_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_20200819T111423_20200819T111707_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_20200819T111710_20200819T111744_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_20200819T121208_20200819T121349_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_20200819T125629_20200819T125642_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_20200819T134107_20200819T134248_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_20200819T134957_20200819T135212_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_20200819T142944_20200819T143244_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_20200819T143344_20200819T143558_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_20200819T152015_20200819T152204_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_20200819T152851_20200819T153338_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_20200819T161027_20200819T161422_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_20200819T171003_20200819T171155_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_20200819T215831_20200819T215956_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_20200819T220506_20200819T220813_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	Inere 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_20200819T233914_20200819T234203_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_20200819T234410_20200819T234935_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_20200819T011751_20200819T012408_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_20200819T012408_20200819T012520_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_20200819T030041_20200819T030446_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_20200819T043720_20200819T044400_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_20200819T061907_20200819T062426_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_20200819T074713_20200819T074916_C001	Mean Dynamic Topography (1)	There is an error with the GPD Wet Tropospheric correction, the MSS height (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_GOPR_2_20200819T075813_20200819T080610_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_20200819T093655_20200819T094515_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_20200819T111744_20200819T112345_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_20200819T125643_20200819T130225_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_20200819T130239_20200819T130357_C001	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 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_GOPR_2_20200819T132356_20200819T132516_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_20200819T143558_20200819T144145_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_20200819T161423_20200819T161942_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_20200819T175241_20200819T180235_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_20200819T193209_20200819T193751_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_20200819T194803_20200819T194908_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_20200819T210929_20200819T211557_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_20200819T211557_20200819T211721_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_20200819T224736_20200819T225457_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_20200819T225457_20200819T225707_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_20200819T225925_20200819T230941_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records

#### 5.5 L2 Measurement Confidence Data Check

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

4

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20200819T015133_20200819T015332_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20200819T031404_20200819T031715_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20200819T155849_20200819T160940_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20200819T193840_20200819T194552_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

# 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20Hz)

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

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

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

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

84

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20200819T000016_20200819T002313_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_20200819T003248_20200819T003441_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_20200819T003750_20200819T003909_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_20200819T004222_20200819T004828_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_20200819T010343_20200819T011048_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_20200819T012641_20200819T013002_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_20200819T013212_20200819T013802_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_20200819T013929_20200819T014745_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_20200819T015405_20200819T020414_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_20200819T021137_20200819T021356_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_20200819T021431_20200819T021852_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_20200819T022133_20200819T022737_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_20200819T022854_20200819T023532_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_20200819T023711_20200819T025231_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_20200819T031404_20200819T031715_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_20200819T031845_20200819T032113_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_20200819T032236_20200819T032547_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_20200819T033049_20200819T034522_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_20200819T034926_20200819T035800_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_20200819T040130_20200819T042301_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_20200819T043033_20200819T043035_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_20200819T050221_20200819T052455_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_20200819T053126_20200819T053603_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_20200819T054428_20200819T060834_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.
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CS_OFFL_SIR_GOPM_2_20200819T063748_20200819T070309_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_20200819T071952_20200819T074600_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_20200819T080913_20200819T084228_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_20200819T084952_20200819T085510_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_20200819T090149_20200819T090334_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_20200819T093243_20200819T093655_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_20200819T094516_20200819T094544_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_20200819T094707_20200819T095753_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_20200819T100040_20200819T102152_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_20200819T103003_20200819T103408_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_20200819T103922_20200819T104914_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_20200819T105102_20200819T105715_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_20200819T105853_20200819T110335_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_20200819T112538_20200819T120038_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_20200819T120343_20200819T120854_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_20200819T120914_20200819T121207_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_20200819T121954_20200819T125031_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_20200819T130357_20200819T130928_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_20200819T131000_20200819T132341_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_20200819T132517_20200819T134015_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_20200819T134249_20200819T134753_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_20200819T134800_20200819T134806_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_20200819T135723_20200819T140731_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_20200819T141350_20200819T142943_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_20200819T144254_20200819T145950_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_20200819T150056_20200819T150338_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_20200819T150518_20200819T151847_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_20200819T152205_20200819T152704_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_20200819T152730_20200819T152739_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_20200819T152747_20200819T152850_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_20200819T153509_20200819T155727_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_20200819T155849_20200819T160940_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_20200819T163638_20200819T165717_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_20200819T170248_20200819T170622_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_20200819T170645_20200819T171003_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_20200819T171339_20200819T174048_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_20200819T181220_20200819T183707_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_20200819T184032_20200819T184537_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_20200819T185313_20200819T192637_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_20200819T201221_20200819T201632_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_20200819T202032_20200819T202611_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_20200819T202713_20200819T202812_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_20200819T203353_20200819T210605_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_20200819T210811_20200819T210842_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_20200819T210851_20200819T210929_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_20200819T213841_20200819T215426_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_20200819T221208_20200819T224736_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_20200819T225707_20200819T225925_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_20200819T231458_20200819T233234_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_20200819T234203_20200819T234410_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_20200819T235155_20200820T002743_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_20200819T015333_20200819T015404_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_20200819T025954_20200819T030041_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_20200819T091728_20200819T091912_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_20200819T094544_20200819T094609_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_20200819T125629_20200819T125642_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_20200819T155728_20200819T155849_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_20200819T014745_20200819T014959_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_20200819T095754_20200819T100039_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_20200819T201633_20200819T201917_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

### L2 Quality Flags (20Hz PLRM)

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

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

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

89

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20200819T003441_20200819T003750_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_20200819T021852_20200819T022030_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_20200819T025943_20200819T025954_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_20200819T030446_20200819T030658_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_20200819T030827_20200819T031050_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_20200819T031242_20200819T031403_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_20200819T032726_20200819T033048_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_20200819T042850_20200819T043007_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_20200819T044400_20200819T044850_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_20200819T053604_20200819T053821_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_20200819T060835_20200819T060940_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_20200819T061609_20200819T061707_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_20200819T062426_20200819T062538_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_20200819T070648_20200819T070808_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_20200819T075517_20200819T075530_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_20200819T080610_20200819T080721_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_20200819T084640_20200819T084952_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_20200819T085510_20200819T085625_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_20200819T091407_20200819T091448_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_20200819T091728_20200819T091912_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_20200819T092739_20200819T092822_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_20200819T094635_20200819T094706_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_20200819T102456_20200819T102838_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_20200819T103409_20200819T103534_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_20200819T105805_20200819T105852_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_20200819T121208_20200819T121349_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_20200819T125032_20200819T125207_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_20200819T130225_20200819T130239_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_20200819T140731_20200819T140837_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_20200819T142944_20200819T143244_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_20200819T143344_20200819T143558_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_20200819T152015_20200819T152204_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_20200819T152851_20200819T153338_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_20200819T162919_20200819T163020_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_20200819T163100_20200819T163438_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_20200819T170016_20200819T170248_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_20200819T184912_20200819T185044_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_20200819T192637_20200819T192829_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_20200819T195927_20200819T200122_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_20200819T201917_20200819T202032_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_20200819T210606_20200819T210711_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_20200819T211721_20200819T211740_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_20200819T213759_20200819T213841_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_20200819T215831_20200819T215956_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_20200819T220506_20200819T220813_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_20200819T231410_20200819T231457_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_20200819T234410_20200819T234935_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_20200818T235845_20200819T000015_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_20200819T011751_20200819T012408_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_20200819T014745_20200819T014959_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_20200819T025249_20200819T025336_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_20200819T025803_20200819T025837_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_20200819T025850_20200819T025943_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_20200819T035958_20200819T040129_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_20200819T042301_20200819T042441_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_20200819T052455_20200819T052716_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_20200819T053821_20200819T054101_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_20200819T070309_20200819T070648_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_20200819T071806_20200819T071952_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_20200819T074713_20200819T074916_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_20200819T075233_20200819T075410_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_20200819T075813_20200819T080610_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_20200819T084229_20200819T084639_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_20200819T085625_20200819T085927_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_20200819T090334_20200819T090549_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_20200819T092933_20200819T093115_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_20200819T102153_20200819T102456_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.

CupPrL_sill_SOURC_C0000619113630_2000619113610_2000         OCOG Backsteater Quality         nore records.           CS_OFFL_SIR_GOPR_2_202006191136015_202006191134015_202006191134015_202006191136212_202006191136213_202006191136233_20001         COCGG Altimeter Range Cuality FIRM, The OcoGG Range and Backscatter Quality FIRgs have been set for one or more records.           CS_OFFL_SIR_GOPR_2_202006191136213_2020         COCGG Altimeter Range Cuality FIRM, The OcoGG Range and Backscatter Quality FIRgs have been set for one or more records.         The OcoGG Altimeter Range SIMA SIMH, and Backscatter Quality FIRgs have been set for one or more records.           CS_OFFL_SIR_GOPR_2_2020061911362013_2001         COCGG Altimeter Range SIMA SIMH, and Backscatter Quality FIRgs have been set for one or more records.         The OCOGG Ran	CS_OFFL_SIR_GOPR_2_20200819T103534_20200819T103922_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.
Cig. QFL_SR_GOPR_2_2003819112144_2000         mail Bockstatter Dunky PLAN, OTCO         mail Bockstatter Dunky PLAN, OTCO           Cig. QFL_SR_GOPR_2_2003819112228_2000819113028_CODI         Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO         Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO           Cig. QFL_SR_GOPR_2_2003819113028_2000819113028_CODI         Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO         The Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO           Cig. QFL_SR_GOPR_2_2003819113228_2000819113028_CODI         COCEA Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO         The Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO           Cig. QFL_SR_GOPR_2_2003819113228_2000819113419_CODI         COCEA Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO         The Code Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, OTCO           Cig. QFL_SR_GOPR_2_20038191134212_C0039191134192_C001         Cocea Allmeine Renge SSH, SMH, MAIL Bockstatter Dunky PLAN, Mail Bockstatter Dunky PLAN, OTCO         The CoceA Allmeine Renge SSH, SMH, MAIL Renge Backstatter Dunky PLAN, Mail Bockstatter Dunky PLAN, Mail Bockstatter Dunky PLAN, Mail Bockstatter Dunky PLAN, Cig. QFL_SR_GOPR_2_20038191114512_C0009191141137_C0001         Cocea Allmeine Renge SSH, SMH, MAIL Renge Backstatter Dunky PLAN, Cig. QFL_SR_GOPR_2_20038191114512_C00091911601152_C001         Cocea Allmeine Renge SSH, SMH, Mail Bockstatter Dunky PLAN, Cig. QFL_SR_GOPR_2_20038191115212_C00091911601152_C001         Cocea Allmeine Renge SSH, MAIL Mail Renge Backstatter Dunky PLAN, Cig. QFL_SR_GOPR_2_20038191115212_C00091911601152_C001         Cocea Allmeine	CS_OFFL_SIR_GOPR_2_20200819T111744_20200819T112345_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB_QEPL_SR_GOPR_2_2000819T13028_2000819T13028_0000       Immed Baskeater Dealing PLAN. OCD: Hender Resp. SSIA.       Immed Resp. SSIA.         CB_QEPL_SR_GOPR_2_2000819T13289_0000819T13289_0000       COM Resp. Resp. SSIA.       Immed Resp. SSIA.       Immed Resp. SSIA.         CB_QEPL_SR_GOPR_2_2000819T13289_0000819T132812_0000       Com Resp. SSIA.       Immed Resp. SSIA.       Immed Resp. SSIA.         CB_QEPL_SR_GOPR_2_2000819T132812_0000819T132812_0000819T132812_0000       Com Resp. SSIA.       Immed Resp. SSIA.       Immed Resp. SSIA.         CB_QEPL_SR_GOPR_2_2000819T132812_0000819T132812_0000819T132812_0000819T132812_0000819T135212_0000819T135212_0000819T135212_0000819T135212_0000819T135212_0000819T18273_0001       Com Attempt Resp. SSIA.       Immed Res	CS_OFFL_SIR_GOPR_2_20200819T121349_20200819T121954_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Conference of the conference o	CS_OFFL_SIR_GOPR_2_20200819T130239_20200819T130357_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_2000819T134012_0200819T134107_C001       Am Backatter Quality FLAN_COCO       Im Backatter Quality FLAN_COCO         CS_OFFL_SIR_GOPR_2_2000819T13512_2000819T13572_C001       CG Gent Allmeint Parge_SSIA_SWH       The Ocean Allmeint Parge_SSIA_SWH         CS_OFFL_SIR_GOPR_2_2000819T13572_20001       CG Gent Allmeint Parge_SSIA_SWH       The Ocean Allmeint Parge_SSIA_SWH         CS_OFFL_SIR_GOPR_2_2000819T13572_20001       CG Gent Allmeint Parge_SSIA_SWH       The Ocean Allmeint Parge_SSIA_SWH         CS_OFFL_SIR_GOPR_2_2000819T141147_20000119T141348_C001       CCG Gentrete Range Quality PLRA, CCG GENTL_SIR_GOPR_2_2000819T142132_2000819T162122_0001       CCGG Allmeinter Range Quality PLRA, CCGG Beackatter Quality         CS_OFFL_SIR_GOPR_2_2000819T162132_0001       CCGG Allmeinter Range Quality PLRA, CCG Gentrete Range Quality PLRA, CCGG Gentrete Range Quality PLRA, CCG GENTL_SIR_GOPR_2_2000819T162132_000019T162132_0001       The Ocean Allmeinter Range and Backacatter Quality Plags have been set for one one records.         CS_OFFL_SIR_GOPR_2_2000819T162132_000019T170016_C001       CCG Gentrete Range Quality PLRA, CCGG Allmeinter Range and Backacatter Quality Plags have been set for one one records.         CS_OFFL_SIR_GOPR_2_2000819T170018_000000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_000019T180203_0000019T180203_000019T180203_000019T180203_0000019T	CS_OFFL_SIR_GOPR_2_20200819T132356_20200819T132516_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CB_OFFL_SIR_GOPR_2_20200619T13212_C000         and Bobcscatter Ouality PLRM, C000         The COOG Rationater Theorem of Bobcscatter Ouality Plags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T141137_20200619T141137_20200619T141137_20200619T14213_C001         COCG Altineter Range Ouality PLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T162018_20200619T16213_C001         COCG Altineter Range Ouality FLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T162018_20200619T162018_C0011         COCG Altineter Range Ouality FLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T162018_20200619T162035_C001         COCG Altineter Range Ouality FLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T162013_20200619T162035_C001         COCG Altineter Range Ouality FLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T162032_20200619T162033_C001         COCG Altineter Range Ouality FLRM, C000         The COCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB_OFFL_SIR_GOPR_2_20200619T102033_20200619T162033_C001         COCG Altineter Range Ouality FLRM, C000         The CoCG Range and Bookscatter Ouality Flags have been set for one or more records.           CB	CS_OFFL_SIR_GOPR_2_20200819T134015_20200819T134107_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Open Land, SUPP Control         Occol Backscatter Quality         more records.           CS_OFFL_SIR_GOPR_2_202008191162018_202008191162123_C001         CCCO Allmeter Range Guality PLRM, and Backscatter Quality PLRM, and Backscatter Quality PLRM, and Backscatter Quality PLRM, and Backscatter Quality FLRM, QCCO Allmeter Range and Backscatter Quality FLRM, CS_OFFL_SIR_GOPR_2_202008191176241_202008191180235_C001         The Cocol Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range and Backscatter Quality FLRM, DCCCO Backscatter Quality FLRM, QCCO Allmeter Range and Backscatter Quality FLRM, DCCCO Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range Clash YLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SVH and Backscatter Quality FLRM, QCCO Allmeter Range and Backscatter Quality FLRM, QCCO Allmeter Range ASHA. SV	CS_OFFL_SIR_GOPR_2_20200819T135212_20200819T135723_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_2020819T162018_2020819T170019_C001         OCOB Backscatter Quality Films         more records.           CS_OFFL_SIR_GOPR_2_2020819T160718_2020819T170019_C001         Doesn Altimeter Range SINA, SWH and Backscatter Quality Films, MOCG ALLEN         more records.           CS_OFFL_SIR_GOPR_2_2020819T160718_20200819T170019_C001         DOEsn Altimeter Range, SNA, SWH and Backscatter Quality Films, DOCG Backscatter Quality Films, DOCG Backscatter Quality Films, DOCG Backscatter Quality Films, The OCOG Altimeter Range, SNA, SWH and Backscatter Quality Films, DOCG Backscatter Quality Films, The OCOG Range and Backscatter Qual	CS_OFFL_SIR_GOPR_2_20200819T141137_20200819T141349_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200819T165718_20200819T170016_C001         and Backscatter Quality PLRM. OCOO Allimeter Range and Backscatter Quality PLRM. OCOO Allimeter Range and Backscatter Quality PLRM. OCOO Allimeter Range and Backscatter Quality Flags have been set for one or more records.         The OCOG Range and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_GOPR_2_20200819T165044_20200819T185013_C001         OCOG Allimeter Range SSHA_SVH and backscatter Quality PLRM. OCOG Backscatter Quality PLRM.         The OCOG Range and Backscatter Quality Flags and Backscatter Quality Flags and Backscatter Quality Flags.           CS_OFFL_SIR_GOPR_2_20200819T185044_20200819T185013_C001         OCOG Allimeter Range SSHA_SVH and backscatter Quality Flags.         The OCOG Range and Backscatter Quality Flags and Backscatter Quality Flags.           CS_OFFL_SIR_GOPR_2_20200819T192830_20200819T192853_C001         OCOG Allimeter Range SSHA_SVH and Backscatter Quality Flags.         The OCOG Range and Backscatter Quality Flags.           CS_OFFL_SIR_GOPR_2_20200819T201633_20200819T201917_C001         OCOG Ranterter Range SSHA_SVH and Backscatter Quality Flags.         The OCOG Range and Backscatter Quality Flags.           CS_OFFL_SIR_GOPR_2_20200819T201928_20200819T211567_C001         OCOA Allimeter Range, SSHA, SVH and Backscatter Quality Flags.         The OCOG Allimeter Range.         The OCOG Allimeter Range. <td< td=""><td>CS_OFFL_SIR_GOPR_2_20200819T162018_20200819T162123_C001</td><td></td><td>The OCOG Range and Backscatter Quality Flags have been set for one or more records.</td></td<>	CS_OFFL_SIR_GOPR_2_20200819T162018_20200819T162123_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200819119241_20208191180239_0001         OCCOB Backscatter Quality         more records.           CS_OFFL_SIR_GOPR_2_202008191185044_20208191185313_C001         Cocan Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality PLRM, OCCOB Backscatter Quality PLRM, OCCOB Backscatter Quality PLRM, OCCO Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_GOPR_2_202008191192833_20208191192833_C001         OCCOA Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCOB Backscatter Quality PLRM, OCCO Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_GOPR_2_202008191201933_202008191201917_C001         OCCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and Backscatter Quality Flags have been set for one or more records.           CS_OFFL_SIR_GOPR_2_202008191201932_202008191201933_C001         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and and the OCCOA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce OCCA Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the oce or more records.           CS_OFFL_SIR_GOPR_2_2020081912121021_20208197212081_202081	CS_OFFL_SIR_GOPR_2_20200819T165718_20200819T170016_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
GS_OFFL_SIR_GOPR_2_20200819T185044_20200819T185313_C001       and Backscatter Quality PLEW. COOL       interfer Range and Backscatter Quality PLEW. Cool         GS_OFFL_SIR_GOPR_2_20200819T192853_C001       CCCG Allimeter Range Quality PLEW. Cool       The OCCG Allimeter Range and Backscatter Quality Flags have been set for one or more records.         GS_OFFL_SIR_GOPR_2_20200819T201633_20200819T201917_C001       CCCG Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range, SSHA, SWH and Backscatter Quality PLEW. Cool Cool Allimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T210929_20200819T21057_C001       Ccean Allimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T2121242_C001       Ccean Allimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T212442_C001       CCCG Allimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T21208_C001       CCCG Allimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CCG_OFIL_SIR_GOPR_2_20200819T212714_20200819T21208_C001       CCCG Allimeter Range, SSHA,	CS_OFFL_SIR_GOPR_2_20200819T175241_20200819T180235_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200819T201932630_0000819T192853_0001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_GOPR_2_20200819T201933_0000819T201917_C001       Altimeter Range, SHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T202928_0000819T203353_C001       Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T203928_0000819T203353_C001       Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T210929_0000819T211557_C001       Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T21212_20200819T212442_C001       Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T212442_C001       Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T212082_0001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T21208_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality <td>CS_OFFL_SIR_GOPR_2_20200819T185044_20200819T185313_C001</td> <td>and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality</td> <td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td>	CS_OFFL_SIR_GOPR_2_20200819T185044_20200819T185313_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20200819T201633_20200819T201917_C001       and Backscatter Quality PLRM, OCOG       and Mimeter Range and Backscatter Quality Plags and the OCG Altimeter Range and Backscatter Quality Plags have been set for one or more records.           CS_OFFL_SIR_GOPR_2_20200819T220	CS_OFFL_SIR_GOPR_2_20200819T192830_20200819T192853_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200819T202928_20200819T203353_C001       and Backscatter Quality PLRM_OCCG       The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T210929_20200819T211557_C001       Decean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T21212_20200819T212142_C001       Decean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T21212_20200819T212442_C001       Decean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T21208_C001       OCCG Altimeter Range Quality PLRM, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T220814_20200819T221208_C001       OCCG Altimeter Range Quality PLRM, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T220814_C001       OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T233234_20200819T233914_C001       OCCG Altimeter Range, SSHA, SWH and Bac	CS_OFFL_SIR_GOPR_2_20200819T201633_20200819T201917_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20200819T210929_20200819T211557_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T21208_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T223234_20200819T233234_20200819T233914_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Ran	CS_OFFL_SIR_GOPR_2_20200819T202928_20200819T203353_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20200819T212112_20200819T212442_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       ine OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCGA Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T213038_C001       OCGG Altimeter Range Quality PLRM, OCGG Backscatter Quality OCGG Backscatter Quality PLRM       The OCGG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T220814_20200819T221208_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PLRM, OCGG Backscatter Quality PLRM, OCGG Backscatter Quality PLRM, OCGG Backscatter Quality PLRM, CS_OFFL_SIR_GOPR_2_20200819T225925_20200819T230941_C001       OCGG Altimeter Range Quality PLRM, OCGG Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PL	CS_OFFL_SIR_GOPR_2_20200819T210929_20200819T211557_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_202008191212714_202008191213038_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_GOPR_2_202008191220814_202008191221208_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         CS_OFFL_SIR_GOPR_2_202008191225925_202008191230941_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_202008191233234_202008191233914_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, 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 the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_202008191233914_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.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20200819T212112_20200819T212442_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20200819T220814_20200819T221208_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality       The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPR_2_20200819T225925_20200819T230941_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCGG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_GOPR_2_20200819T233234_20200819T233914_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags hand the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags hand the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags hat the OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPR_2_20200819T212714_20200819T213038_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_202008191233925_202008191230941_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_GOPR_2_202008197233234_202008197233914_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         CS_OFFL_SIR_GOPR_2_202008197234935_202008197235154_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been atter on a more arcords.	CS_OFFL_SIR_GOPR_2_20200819T220814_20200819T221208_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPR_2_20200819T233234_20200819T233914_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       Interest Range and Backscatter Quality PLRM       Interest Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM         CS_OFFL_SIR_GOPR_2_20200819T234935_20200819T235154_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quali	CS_OFFL_SIR_GOPR_2_20200819T225925_20200819T230941_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200819T234935_20200819T235154_C001 and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags have been and Backscatter Qua	CS_OFFL_SIR_GOPR_2_20200819T233234_20200819T233914_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_GOPR_2_20200819T234935_20200819T235154_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

186

> 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.

#### 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.

141

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:

#### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

#### 6.4 P2P Auxiliary Correction Error Check

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

0

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

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

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

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

30

Test Failed	Description
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
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
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
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
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
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
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), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
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
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), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
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
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
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
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
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
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
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
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), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
	Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic

CS_OFFL_SIR_GOP_220200819T134810_20200819T143745_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_20200819T143745_20200819T152725_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_20200819T152725_20200819T161700_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_220200819T161700_20200819T170639_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_20200819T170639_20200819T175614_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_20200819T175614_20200819T184554_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_20200819T184554_20200819T193529_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_20200819T193529_20200819T202509_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_20200819T202509_20200819T211444_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_20200819T211444_20200819T220423_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_20200819T220423_20200819T225358_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), 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_220200819T225358_20200819T234338_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_20200819T234338_20200820T003313_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.

Number of products with errors: 4

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220200819T012347_20200819T021327_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_2_20200819T030302_20200819T035242_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_2_20200819T152725_20200819T161700_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_2_20200819T193529_20200819T202509_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20Hz)

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

Since the FZF wuanty Flags are copied un	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	30
P2P Quality Flags (20Hz PLRM)	
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	27
P2P Quality Flags (1 Hz & 1Hz PL	RM)
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	30
6.8 P2P Ocean Retracking Qua	lity Check
P2P Retracking Flags (20Hz)	
	ng quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.
Cryosat P2P data includes an ocean retrackin	ng quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set. is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.
Cryosat P2P data includes an ocean retrackin	
Cryosat P2P data includes an ocean retrackin Ocean Retracking Quality Flag (PLRM): Th	is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.
Cryosat P2P data includes an ocean retrackir Ocean Retracking Quality Flag (PLRM): Th Number of products with errors: P2P Retracking Flags PLRM	is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.
Cryosat P2P data includes an ocean retrackin Ocean Retracking Quality Flag (PLRM): Th Number of products with errors: P2P Retracking Flags PLRM CryoSat L2 data includes an ocean retracking	is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.
Cryosat P2P data includes an ocean retrackin Ocean Retracking Quality Flag (PLRM): Th Number of products with errors: P2P Retracking Flags PLRM CryoSat L2 data includes an ocean retracking	is flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected. 28 g quality flag for each 20-Hz PLRM measurement record. The bit value of this flag indicates any problems when set.

### 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	164	164	6	158	0
SIR_GOPR1B	107	107	0	107	0
SIR_GOPN1B	112	112	0	112	0

SIR_GOPM_2	164	164	105	59	0
SIR_GOPR_2	107	107	37	67	3
SIR_GOPN_2	112	112	48	64	0
SIR_GOP_P2P	29	29	0	26	3

# 7.1 QCC Errors

#### Number of QCC reports with errors:

6 Total number of occurrences of each error Product TypeRLOBOPNCDFSIR\_GOPR\_23 RL RLOBOPNCDF RL 3 3 3 Product Type RLOBOPNCDF RLOBOPNCDF RL RL SIR\_GOP\_2\_ 3 3 3 3 Test Description Key: Abbreviation RLOBOPNCDF Test name Details RangeLatitudeOrBlankOP\_7NetCDF Latitude should be between -90E7 and 90E7 RangeLatitude\_7 RL Latitude should be between -90E7 and 90E7 RangeLongitudeOrBlankOP\_7NetCDF RLOBOPNCDF Longitude should be between -180E7 and 180E7

Longitude should be between -180E7 and 180E7

### 7.2 QCC Warnings

RL

#### Number of QCC reports with warnings

RangeLongitude\_7

umber of QCC repo	rts with warnings	2160	Total num	per of occurrences of ea	ach warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN
SIR GOPM1B	158	0	0	0	0	0	0
SIR GOPM 2	0	0	45	40	1	37	0
SIR GOPN1B	109	0	0	0	0	0	0
SIR GOPN 2	0	0	7	27	6	26	28
SIR GOPR1B	104	0	0	0	0	0	0
SIR_GOPR_2	0	3	33	38	1	38	30
			4				
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCI	RPEPOPFDPLRMSINNCI	DIRPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	30	0	37	0	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	22	0	0	0	20	0	30
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	21	1	0	40	0	45	0
Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	29	0	0	7	38	0	5
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	22	18	46	54	29
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	38	0	4	61	49	13
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD		SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_GOPM1B	0	0	0	0	0	0	
SIR_GOPM_2	42	0	5	0	0	0	
SIR_GOPN1B	0	0	0	0	47	0	
SIR_GOPN_2	24	30	14	1	0	0	
SIR_GOPR1B	0	0	0	0	107	4	
SIR_GOPR_2	39	43	1	3	0	0	
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	
SIR_GOP_2_	15	29	29	8	29	18	29
	DUEL DOTONODE	RPEPOPFDPLRMSINNCI		RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
Broduct Type			DINFLFOFTDOINNODF	INFEF OF SINNODF	ROODCONODF	NOOTAOT DIVODE	
Product Type	RNELPOTONCDF		20	22	10	20	19
Product Type SIR_GOP_2_	2	18	29	22	19	29	18
			29 RSWHOEPFDPLRMNCDF		19 SPHLPQWNCDF	-	18

Fest Description Key:					
Abbreviation	Test name	Details			
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter			
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)			
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees			
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees			
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only			
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean			
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDPLRMSAR	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDPLRMSINN	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean			
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean			

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

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0