





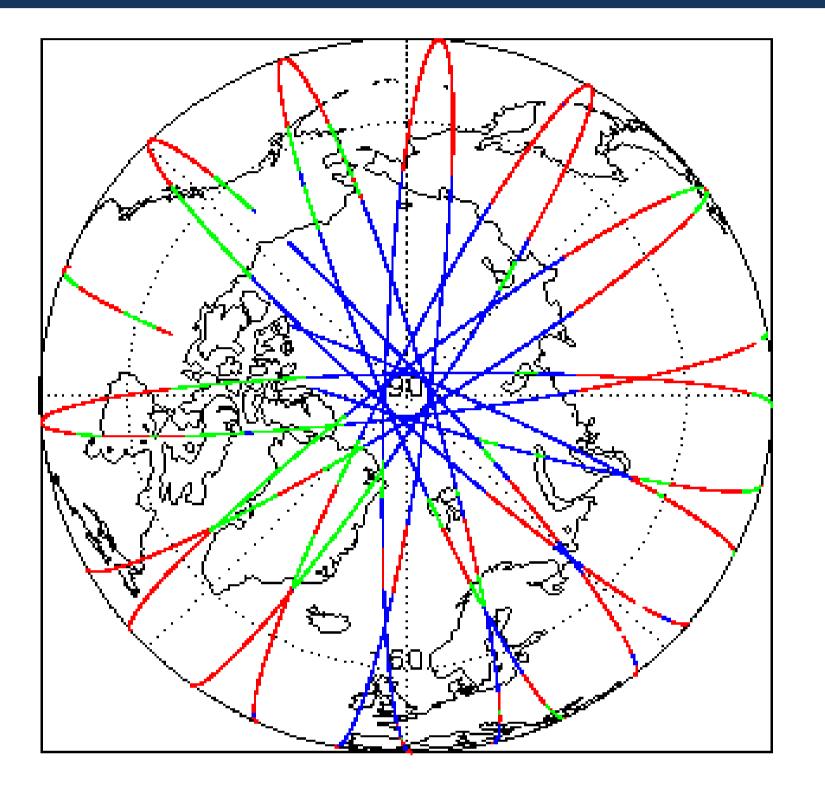
### 1. Overview

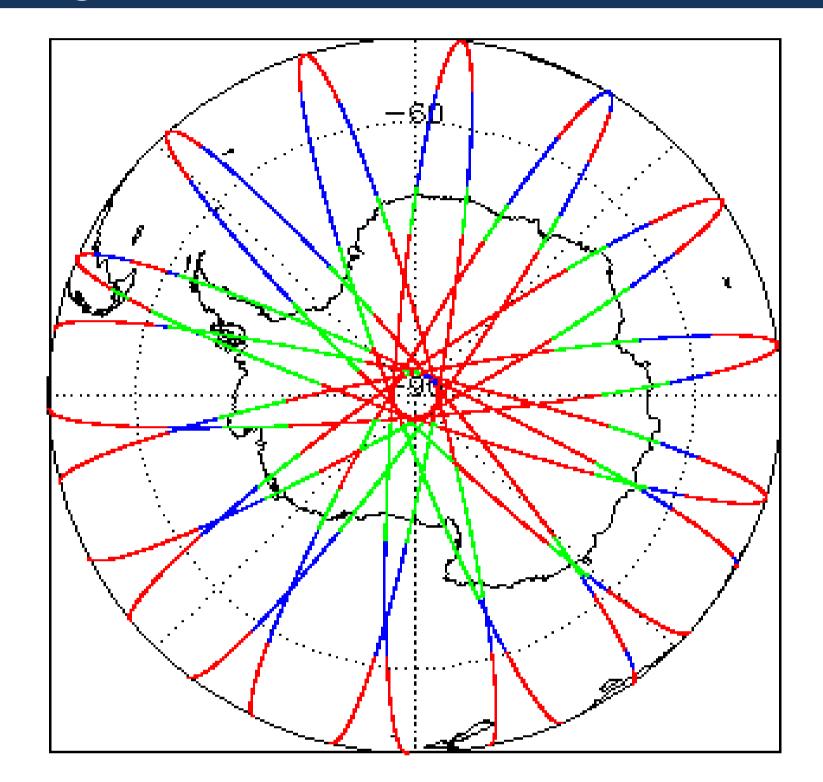
<b>Report Production:</b>	14-Nov-2022		
Processor Used:	CryoSat Ocean Processor		
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data		

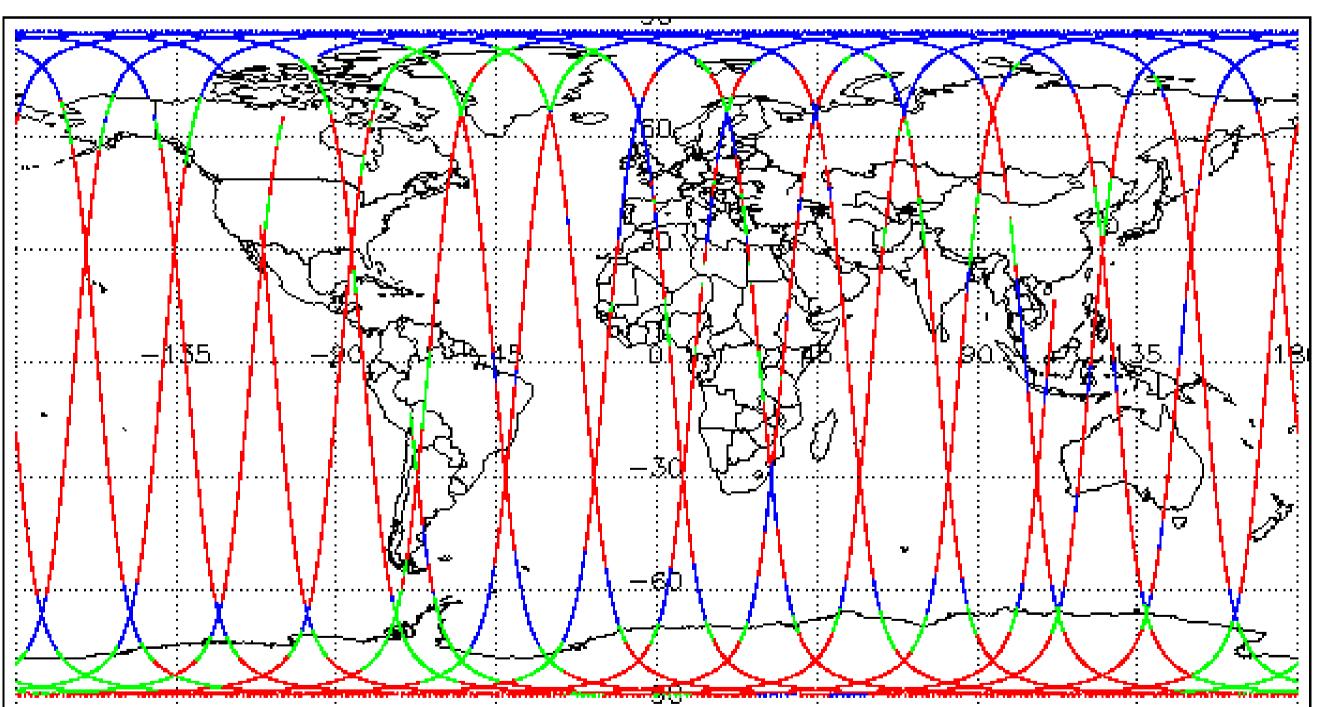
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.2	See Section 7.2 and 7.3

Mission / Instru	iment News
12-Oct-2022	None
13-Oct-2022	None
14-Oct-2022	Nothing planned

# 2. Global Coverage











### **3. Instrument Configuration**

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

SIRAL instrument(s) in use:	SIRAL - A
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# 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 NetCDF product file (.nc).

Number of products with errors:

#### **4.2 L1B Product Header Analysis**

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

L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B GOPR and GOPN products because the I1b_processing_quality_hr field is not correctly configured in the OSAR ar
OSARIn chains. A modification is required in the next release.

Number of products with errors:

#### 4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

#### 4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

0

0

0

#### 4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20221013T221039_20221013T222301_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

#### 4.6 L1B Waveform Group Data Check

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

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

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20221013T112109_20221013T113826_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20221013T130446_20221013T133616_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20221013T230436_20221013T231406_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20221013T111845_20221013T112109_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20221013T115751_20221013T120138_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20221013T125525_20221013T125630_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20221013T175841_20221013T180036_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20221013T224229_20221013T224736_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T061114_20221013T061758_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T062926_20221013T063246_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T074954_20221013T075658_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T152919_20221013T153136_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T160900_20221013T161726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20221013T191547_20221013T191650_C001	Loss of Echo	The tracking echo is missing for one or more records
5. G	<b>OP</b> Level 2 Data Qu	ality Check
5.1 L2 Product Format Check		
Each product, retrieved and uppacked from the science convertis checked to	ensure it consists of both an XML	header file (.HDR) and a NetCDF product file (.nc).
Each product, retheved and unpacked from the science server, is checked to		
Number of products with errors: 0		

Number of products with errors:

### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

0

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 that are expected, due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues that 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.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20221013T062824_20221013T062925_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_20221013T002218_20221013T002403_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_20221013T003048_20221013T003542_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_20221013T011229_20221013T011625_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_20221013T021156_20221013T021352_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_20221013T070030_20221013T070155_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_20221013T070705_20221013T071011_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), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20221013T084104_20221013T084358_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_20221013T084609_20221013T085131_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_20221013T093706_20221013T094128_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), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20221013T102045_20221013T102320_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_20221013T111603_20221013T111715_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_20221013T111845_20221013T112109_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_20221013T115751_20221013T120138_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_20221013T125525_20221013T125630_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_20221013T125804_20221013T125949_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20221013T133806_20221013T133956_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_20221013T134818_20221013T135030_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_20221013T143022_20221013T143051_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_20221013T151743_20221013T151921_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_20221013T165739_20221013T170120_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_20221013T183708_20221013T184025_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_20221013T184537_20221013T184703_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_20221013T192800_20221013T192900_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_20221013T210707_20221013T210821_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_20221013T224229_20221013T224736_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_20221013T234018_20221013T234630_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_20221013T011626_20221013T012147_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_20221013T025447_20221013T030455_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20221013T043212_20221013T043529_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_20221013T043529_20221013T043949_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_20221013T045020_20221013T045102_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_20221013T061114_20221013T061758_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_20221013T061758_20221013T061925_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_20221013T074954_20221013T075658_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_20221013T075658_20221013T075918_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_20221013T093133_20221013T093552_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_20221013T093553_20221013T093705_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GPD Wet Tropospheric correction, the MSS height (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_GOPR_2_20221013T110933_20221013T111417_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_20221013T111417_20221013T111603_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_20221013T122645_20221013T123434_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_20221013T124912_20221013T125525_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_20221013T142620_20221013T142904_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPR_2_20221013T143051_20221013T143515_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_20221013T160900_20221013T161726_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_20221013T174845_20221013T175632_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_20221013T192900_20221013T193659_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_20221013T210821_20221013T211541_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_20221013T224736_20221013T225451_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### **5.5 L2 Measurement Confidence Data Check**

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20221013T221039_20221013T222301_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 (20 Hz)

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.

1

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20221012T234945_20221013T000539_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_20221013T000719_20221013T002037_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_20221013T002404_20221013T002903_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_20221013T003706_20221013T005928_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_20221013T010050_20221013T011229_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_20221013T013053_20221013T013123_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_20221013T013829_20221013T015911_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_20221013T020446_20221013T020821_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_20221013T021540_20221013T024329_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_20221013T030618_20221013T031313_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_20221013T031430_20221013T033856_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_20221013T034229_20221013T034736_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_20221013T034743_20221013T035110_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_20221013T035514_20221013T042830_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_20221013T044052_20221013T044319_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_20221013T050452_20221013T050923_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_20221013T051420_20221013T051753_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_20221013T052229_20221013T052810_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T053552_20221013T060802_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_20221013T061018_20221013T061037_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_20221013T062012_20221013T062203_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_20221013T064043_20221013T065625_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_20221013T070155_20221013T070705_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_20221013T071404_20221013T074923_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_20221013T074926_20221013T074940_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_20221013T081659_20221013T083432_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_20221013T084358_20221013T084608_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_20221013T085345_20221013T092713_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_20221013T094131_20221013T100035_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_20221013T100125_20221013T101448_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_20221013T102641_20221013T103020_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_20221013T103258_20221013T104741_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_20221013T104943_20221013T105906_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_OFTL_SIR_GOPM_2_20221013*11204_20221013*113645_001     COCO_Arrenter Margo Castly, COCO     The DOCO_Arrenter Margo Castly, COCO       CS_OFTL_SIR_GOPM_2_20221013*11204_20221013*113826_COT     Annual Range, SDM, SDM     The Coco_Arrenter Range, SDM, SDM       CS_OFTL_SIR_GOPM_2_20221013*11204_20221013*113826_COT     Annual Range, SDM, SDM     The Doce Arrenter Range, SDM, SDM       CS_OFTL_SIR_GOPM_2_20221013*11204_20221013*113826_COT     Annual Range, SDM, SDM     The Doce Arrenter Range, SDM, SDM       CS_OFTL_SIR_GOPM_2_20221013*1207_2014_202010*12014_2040_0001     Bootscatter Casity, COCO     The DOCO Arrenter Range and Bootscatter Casity, Flags Inter Barge       CS_OFTL_SIR_GOPM_2_20221013*12014_202010*12014_2040_0001     Bootscatter Casity, COCO     The DOCO Arrenter Range and Bootscatter Casity, Flags Inter Barge       CS_OFTL_SIR_GOPM_2_20221013*12128_00221013*12014_20001     DOCI Arrenter Range, CASIN, SOM     The DOCO Arrenter Range and Bootscatter Casity, Flags Inter Barge       CS_OFTL_SIR_GOPM_2_20221013*12128_00221013*12014_20001     Doce Arrenter Range, SIN, SOM     The DOCO Arrenter Range and Bootscatter Casity, Flags Inter Barge       CS_OFTL_SIR_GOPM_2_20221013*12128_00221013*12014_20001     Doce Arrenter Range, SIN, SOM     The DOCO Arrenter Range and Bootscatter Casity, Flags Inter Barge       CS_OFTL_SIR_GOPM_2_20221013*12014_20221013*12014_2001     Doce Arrenter Range, SIN, SOM     The DOCOO Arrenter Range, SIN, SOM
CS_OFFL_SIR_GOPM_2_20221013T112168_20221013T113326_0001   and Backstater Quality, COCQ Millinear Range and Backstater Quality Flags have and the oce on more records.   and the Oce on Millinear Range ASHA, SWH and Backstater Quality, COCQ Millinear Range and Backstater Quality, COCQ Backstater Quality.   The Ocean Allinear Range ASHA, SWH and Backstater Quality, COCQ Backstater Quality, COCQ Backstater Quality.     CS_OFFL_SIR_GOPM_2_20221013T120149_20221013T120448_C001   QCOG Allinear Range Quality, QCOQ Backstater Quality.   The OCOG Allinear Range AsHA Backstater Quality.     CS_OFFL_SIR_GOPM_2_20221013T120449_20221013T120442_C001   QCOG Allinear Range Quality, QCOQ Backstater Quality.   The OCOG Allinear Range And Backstater Quality Flags have to for one or more records.     CS_OFFL_SIR_GOPM_2_20221013T120449_20221013T120442_C001   QCOG Allinear Range Quality, QCOQ Backstater Quality.   The OCOG Allinear Range And Backstater Quality Flags have to for one or more records.     CS_OFFL_SIR_GOPM_2_20221013T120449_20221013T120442_C001   QCOG Allinear Range Clusity, QCOQ Backstater Quality.   The OCOG Allinear Range and Backstater Quality Flags have to for one or more records.     CS_OFFL_SIR_GOPM_2_20221013T120449_20221013T120442_C001   QCOG Allinear Range ASHA, SWH and Backstater Quality.   The OCOG Allinear Range, SSHA, SWH and Backstater Quality.     CS_OFFL_SIR_GOPM_2_20221013T120449_20221013T12042_C001   QCOG Allinear Range.SSHA, SWH and Backstater Quality.   The OCOG Allinear Range, SSHA, SWH and Backstater Quality.     CS_OFFL_SIR_GOPM_2_20221013T13042_20221013T13042_C001
CS_OFFL_SIR_GOPM_2_20221013T115435_20221013T113546_0001     and Baskscatter Quality, DOCG     and Taskscatter Quality, COCG     The OCGA Altimeter Kange and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T120149_20221013T12046_0001     OCGA Altimeter Kange Quality, OCGG     The OCGA Altimeter Kange and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T120149_20221013T12049_0001     OCGA Altimeter Kange Quality, OCGG     The OCGA Altimeter Kange and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T120149_20221013T12049_0001     OCGA Altimeter Kange Quality, OCGG     The OCGA Altimeter Kange SHA, SVH and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T12112418_20221013T12049_0001     OCGA Altimeter Kange Quality, OCGG     The OCGA Altimeter Kange Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T120149_0001     OCGA Altimeter Kange, SHA, SVH and Baskscatter Quality Flags have be for one or more records.     The OCGA Altimeter Kange, SHA, SVH and Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality and Illococca Altimeter Kange, SHA, SVH and Baskscatter Quality Flags have be for one or more records.       CS_OFFL_SIR_GOPM_2_20221013T13015_20221013T1300
CS_OFFL_SIR_GOPM_2_20221013112048_202210131120492_0001     Backscatter Quality     Itr one or more records       CS_OFFL_SIR_GOPM_2_20221013112048_202210131120492_0001     OCOG Altimeter Range Quality, OCOG Backscatter Quality     The Ocean Altimeter Range, SSHA_SWH and Backscatter Quality Flags have be for one or more records       CS_OFFL_SIR_GOPM_2_20221013112208_20221013112208_5_0001     OCCEA Altimeter Range, SSHA_SWH and Backscatter Quality Flags have Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have be for one or more records       CS_OFFL_SIR_GOPM_2_202210131124148_0001     OCCEA Altimeter Range, SSHA_SWH and Backscatter Quality, Flags have be for one or more records       CS_OFFL_SIR_GOPM_2_202210131125448_202210131130061_0011     OCEA Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, Flags have be for one or more records       CS_OFFL_SIR_GOPM_2_20221013T134220_20221013T134618_2021     Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backscatter Quality, SCGG Altimeter Range, SSHA, SWH and Backscatter Quality, SSHA, SWH and Backs
OS_OFFL_SIR_GOPM_2_20221013112049_20221013112042_2001     Backscatter Quality     for one or more records       OS_OFFL_SIR_GOPM_2_2022101311212284_20021     Ocean Altimeter Range & SSHA, SWH and backscatter Quality, OCOG Altimeter Range & SSHA, SWH and backscatter Quality, OCOG Backscatter Quality, OCOG Backscatter Quality     The Ocean Altimeter Range & SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and the
CS_OFFL_SIR_GOPM_2_20221013T121234_20221013T122345_0001   and Backscatter Quality, GCOG   and the OCOG Altimeter Range and Backscatter Quality Flags have Altimeter Range and Backscatter Quality Set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T124118_20221013T124149_C001   DCOG Altimeter Range Quality, OCOG   The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T125949_20221013T130051_C001   Dcean Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG Altimeter Range, and Backscatter Quality, CCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have Altimeter Range and Backscatter Quality, CCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have Altimeter Range, SSHA, SWH     CS_OFFL_SIR_GOPM_2_20221013T130105_20221013T130322_C001   Dcean Altimeter Range, SSHA, SWH   The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have Altimeter Range and Backscatter Quality, Flags have Altimeter Range, SHA, SWH and Backscatter Quality, Flags have Altimeter Range and Backscatter Quality, Flags have Altimeter Range, SHA, SWH and Backscatter Qu
CS_OFFL_SIR_GOPM_2_20221013T12618_20221013T130051_C001   Backscatter Quality   for one or more records     CS_OFFL_SIR_GOPM_2_20221013T125949_20221013T130051_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, COCG     Altimeter Range and Backscatter Quality, COCG   The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have at for one or more records     CS_OFFL_SIR_GOPM_2_20221013T130105_20221013T130322_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG     Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG   The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have at for one or more records     CS_OFFL_SIR_GOPM_2_20221013T13046_20221013T130361_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality, OCOG     CS_OFFL_SIR_GOPM_2_20221013T134618_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T134280_20221013T134818_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135218_20221013T14643_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T151516_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T155768_C001   Ocean
CS_OFFL_SIR_GOPM_2_20221013T125949_20221013T130051_C001   and Backscatter Quality, COCG   and the CCCG Altimeter Range and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T130105_20221013T130322_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality   The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T133616_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, COCG   The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have at for one or more records     CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T133616_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The Ocean Altimeter Range and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T134818_C001   OCCGA Altimeter Range Quality, OCOG   The OCCGA Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The OCCGA Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T15156_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The OCCGA Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T151516_C001   Ocean Altimeter Range and Backscatter Quality, OCCG   The Ocean Altimeter Range and Backscatter Quality Flags
CS_OFFL_SIR_GOPM_2_20221013T130105_20221013T130322_C001   and Backscatter Quality, OCCG   and the OCCG Altimeter Range and Backscatter Quality Set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T133616_C001   Ocean Altimeter Range, SSHA, SWH   The Ocean Altimeter Range and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T133616_C001   Ocean Altimeter Range, SSHA, SWH   The Ocean Altimeter Range and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T134220_20221013T134818_C001   OCCG Altimeter Range Quality, OCCG   The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The OCean Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T1516_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records   The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T15209_20221013T152626_C001   Ocean Altimeter Range Quality, OCCG   The OCCG Altimeter Range and Backscatter Quality Flags have be for one or more records
CS_OFFL_SIR_GOPM_2_20221013T130446_20221013T13046_C001   and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T134220_20221013T134818_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T151516_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T152209_20221013T152626_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The Ocean Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records   The Ocean Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T155708_C001   Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Fl
CS_OFFL_SIR_GOPM_2_20221013T134220_20221013T134216_C001   Backscatter Quality   for one or more records     CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Set for one or more records   The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG   The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T152209_20221013T152626_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The OCean Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Backscatter Quality, OCOG   The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG   The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records     CS_OFFL_SIR_GOPM_2_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20221013T155730_20
CS_OFFL_SIR_GOPM_2_20221013T135219_20221013T141643_C001   and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   and the OCOG Altimeter Range and Backscatter Quality set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T151516_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Files have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T152209_20221013T152626_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T15209_20221013T152626_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T155730_20221013T15578_C001   OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality and backscatter Quality and backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T144848_20221013T151516_C001   and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   and the OCOG Altimeter Range and Backscatter Quality   and the OCOG Altimeter Range and Backscatter Quality     CS_OFFL_SIR_GOPM_2_20221013T152209_20221013T152626_C001   OCOG Altimeter Range Quality, OCOG Backscatter Quality   The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality   The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records     CS_OFFL_SIR_GOPM_2_20221013T155730_20221013T155708_C001   Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have be active records   The Ocean Altimeter Range and Backscatter Quality Flags have be to one or more records
CS_OFFL_SIR_GOPM_2_20221013T152209_20221013T152626_C001   Backscatter Quality   for one or more records     CS_OFFL_SIR_GOPM_2_20221013T153137_20221013T155708_C001   Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG   The Ocean Altimeter Range and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have been on the other records     CS_OFFL_SIR_GOPM_2_20221013T155730_20221013T155730_20221013T155834_C001   OCOG Altimeter Range Quality, OCOG   The OCOG Altimeter Range and Backscatter Quality Flags have been on the other records
CS_OFFL_SIR_GOPM_2_20221013T155730_20221013T155708_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG OCOG Altimeter Range Quality, OCOG OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have be
CS_OFFL_SIR_GOPM_2_20221013T155838_20221013T155928_C001 OCOG Altimeter Range Quality, OCOG for one or more records
CS_OFFL_SIR_GOPM_2_20221013T160221_20221013T160224_C001 OCOG Altimeter Range Quality, OCOG for one or more records
CS_OFFL_SIR_GOPM_2_20221013T160624_20221013T160859_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality flags have been been been been been been been be
CS_OFFL_SIR_GOPM_2_20221013T162223_20221013T165301_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T170120_20221013T170700_C001 OCOG Altimeter Range Quality, OCOG for one or more records
CS_OFFL_SIR_GOPM_2_20221013T171044_20221013T171443_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T173801_20221013T173838_C001 OCOG Altimeter Range Quality, OCOG for one or more records for one or more records
CS_OFFL_SIR_GOPM_2_20221013T174601_20221013T174753_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T180036_20221013T183313_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T184025_20221013T184537_C001 OCOG Altimeter Range Quality, OCOG for one or more records for one or more records

CS_OFFL_SIR_GOPM_2_20221013T185108_20221013T190717_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_20221013T193659_20221013T201216_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_20221013T201810_20221013T202025_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_20221013T202032_20221013T202444_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_20221013T203003_20221013T205515_C001	•	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20221013T205539_20221013T210306_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_20221013T210306_20221013T210344_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_20221013T210528_20221013T210706_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_20221013T211723_20221013T212123_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_20221013T212130_20221013T213004_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_20221013T213445_20221013T213616_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_20221013T213635_20221013T214611_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_20221013T214804_20221013T215133_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_20221013T215406_20221013T215925_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_20221013T221039_20221013T222301_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_20221013T222503_20221013T224229_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_20221013T230436_20221013T231406_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_20221013T231608_20221013T232329_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_20221013T232437_20221013T233022_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_20221013T233332_20221013T233827_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_20221013T233830_20221013T233837_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

### L2 Quality Flags (20 Hz 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.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20221013T003048_20221013T003542_C001	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPN_2_20221013T011229_20221013T011625_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_20221013T013257_20221013T013638_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_20221013T052810_20221013T052855_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_20221013T060803_20221013T060930_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_20221013T060937_20221013T061017_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_20221013T061925_20221013T061935_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_20221013T062204_20221013T062303_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_20221013T070705_20221013T071011_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_20221013T081618_20221013T081659_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_20221013T084104_20221013T084358_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_20221013T084609_20221013T085131_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_20221013T093706_20221013T094128_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_20221013T102518_20221013T102641_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_20221013T105906_20221013T110223_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_20221013T111845_20221013T112109_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_20221013T113827_20221013T114353_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_20221013T115751_20221013T120138_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_20221013T120923_20221013T121108_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_20221013T123604_20221013T123759_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_20221013T123800_20221013T123924_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_20221013T125804_20221013T125949_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_20221013T130051_20221013T130104_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_20221013T142443_20221013T142552_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_20221013T144029_20221013T144151_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_20221013T144533_20221013T144749_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_20221013T151743_20221013T151921_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_20221013T152040_20221013T152208_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_20221013T152626_20221013T152919_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_20221013T161727_20221013T162222_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_20221013T165739_20221013T170120_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_20221013T175632_20221013T175803_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_20221013T175841_20221013T180036_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_20221013T184537_20221013T184703_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_20221013T190717_20221013T191032_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_20221013T191740_20221013T191747_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_20221013T201423_20221013T201810_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_20221013T202445_20221013T202552_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_20221013T210707_20221013T210821_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_20221013T215230_20221013T215405_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_20221013T220150_20221013T220335_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_20221013T224229_20221013T224736_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_20221013T230036_20221013T230436_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_20221013T234018_20221013T234630_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_20221013T235822_20221014T000429_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_20221013T000540_20221013T000719_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_20221013T002042_20221013T002217_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_20221013T011626_20221013T012147_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_20221013T015911_20221013T020212_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_20221013T025447_20221013T030455_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_20221013T043212_20221013T043529_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_20221013T043529_20221013T043949_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_20221013T045013_20221013T045018_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_20221013T053127_20221013T053551_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_20221013T061114_20221013T061758_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_20221013T062303_20221013T062651_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_20221013T062926_20221013T063246_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_20221013T065625_20221013T070029_C001	Altimeter Rande 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_20221013T071011_20221013T071403_C001	Altimeter Rande and Backscatter Ullality	The Ocean Altimeter Range, SSHA, SWH 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_20221013T074941_20221013T074947_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_20221013T074954_20221013T075658_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_20221013T075658_20221013T075918_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_20221013T080128_20221013T081142_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_20221013T083432_20221013T084104_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_20221013T093133_20221013T093552_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_20221013T093553_20221013T093705_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_20221013T100114_20221013T100125_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_20221013T101449_20221013T102045_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_20221013T110933_20221013T111417_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_20221013T122645_20221013T123434_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_20221013T123436_20221013T123502_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_20221013T124912_20221013T125525_C001	LAITIMPTER Range and Backscatter Ullality	The Ocean Altimeter Range, SSHA, SWH 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_20221013T133616_20221013T133805_C001	Altimeter Rande 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_20221013T142620_20221013T142904_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_20221013T143051_20221013T143515_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_20221013T152919_20221013T153136_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_20221013T160508_20221013T160624_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_20221013T160900_20221013T161726_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_20221013T165301_20221013T165739_C001	LAITIMETER 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_20221013T170815_20221013T171044_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_20221013T171443_20221013T171908_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_20221013T174845_20221013T175632_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_20221013T183313_20221013T183707_C001	Altimeter Rande 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_20221013T184703_20221013T185108_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_20221013T191547_20221013T191650_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_20221013T192900_20221013T193659_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_20221013T202552_20221013T203003_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

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

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

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

### **5.8 L2 Ocean Retracking Quality Check**

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L2 Retracking Flags (20 Hz)	
CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz measurement record. The bit value of this flag indicates any prob	ems 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 over land and sea ice, but this is to be expected. The number of products over land and sea ice, but this is to be expected.	oducts with this error flag set is given below.
Number of products with errors: 62	
L2 Retracking Flags (20 Hz PLRM)	
CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz PLRM measurement record. The bit value of this flag indicates ar	ny problems when set.
Ocean Retracking Quality Flag (PLRM): This flag is currently set for products GOPR and GOPN products over sea ice, but this is to be	expected.
Number of products with errors: 141	
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 N	letCDF product file (.nc).
Number of products with errors: 0	
6.2 P2P Product Header Analysis	
For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors re-	aised by the ground-segment processing chain.
Number of products with errors: 0	
6.3 P2P Auxiliary Data File Usage Check	
Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxili	ary Data Files is correct.
Number of products with errors: 0	
6.4 P2P Auxiliary Correction Error Check	

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

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

Number of products with errors: 30

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220221012T233944_20221013T002919_C002	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_GOP_220221013T002919_20221013T011858_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_220221013T011858_20221013T020834_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_220221013T020834_20221013T025813_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_220221013T025813_20221013T034749_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), 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_20221013T034749_20221013T043728_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_220221013T043728_20221013T052704_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_220221013T052704_20221013T061642_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_220221013T061642_20221013T070618_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_220221013T070618_20221013T075557_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), 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_220221013T075557_20221013T084533_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_20221013T084533_20221013T093512_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_220221013T093512_20221013T102448_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), 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_220221013T102448_20221013T111426_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_220221013T11426_20221013T120402_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_220221013T120402_20221013T125341_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_220221013T125341_20221013T134317_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), 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_220221013T134317_20221013T143256_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic
CS_OFFL_SIR_GOP_220221013T143256_20221013T152232_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_220221013T152232_20221013T161211_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_220221013T161211_20221013T170146_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_220221013T170146_20221013T175125_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_220221013T175125_20221013T184101_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_220221013T184101_20221013T193040_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_220221013T193040_20221013T202016_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_20221013T202016_20221013T210955_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_220221013T210955_20221013T215930_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_20221013T215930_20221013T224909_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_220221013T224909_20221013T233845_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_20221013T233845_20221014T002824_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### **6.5 P2P Measurement Confidence Data Check**

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

1

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220221013T215930_20221013T224909_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 (20 Hz) CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products. Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 29 P2P Quality Flags (20 Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 30 P2P Quality Flags (1 Hz & 1 Hz PLRM) Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. Number of products with errors: 30 6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20 Hz) Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20 Hz measurement record. The bit value of this flag indicates any problems when set. Ocean Retracking Quality Flag (PLRM): This flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.

Number of products with errors:

P2P Retracking Flags PLRM

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

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

Number of products with errors:

30

29

# 7. GOP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_GOPM1B	162	162	3	159	0
SIR_GOPR1B	106	106	0	106	0
SIR_GOPN1B	102	102	4	98	0
SIR_GOPM_2	161	161	109	52	0
SIR_GOPR_2	106	106	32	74	0
SIR_GOPN_2	102	102	38	64	0
SIR_GOP_P2P	29	29	0	29	0

### 7.1 QCC Errors

Number of QCC reports with errors:

0

#### 7.2 QCC Warnings

#### Number of QCC reports with warnings

2182

# Total number of occurrences of each warning

Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_GOPM1B	159	0	0	0	0	0	0
SIR_GOPM_2	0	34	38	0	41	0	36
SIR_GOPN1B	98	0	0	0	0	0	0
SIR_GOPN_2	0	13	33	3	28	32	21
SIR_GOPR1B	102	0	0	0	0	0	0
SIR_GOPR_2	0	41	44		33	30	19

Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	26	0	0	0	0	20
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	1	0	0	24	0	34	0
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	6	0	46	0	53	0	0

Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	0	0	5	27	0	2	34
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	28	20	45	53	34	29
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	46	0	2	69	45	10	40

Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-
SIR_GOPM1B	0	0	0	0	0		
SIR_GOPM_2	0	3	0	0	0		
SIR_GOPN1B	0	0	0	47	3		
SIR_GOPN_2	30	16	0	0	0		
SIR_GOPR1B	0	0	0	106	7		
SIR_GOPR_2	48	0	3	0	0		

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_GOP_2_	18	29	29	5	29	17	28

Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOP_2_	5	17	29	22	19	29	18

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
SIR_GOP_2_	26	29	19	16	29		

BCSHNCDF B		Details     The burst counter should be one higher with regard to the previous burst counter
		The burst counter should be one higher with regard to the previous burst counter
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	
		The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIOEPNCDF M	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF M	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	R ANNERACK SCATTERSINTER ATTOUP OF CANEY CHININNPOLATE DZINET. DE	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPNCDF	Y 2 NA A BACK SCATTON NAMA Z ATALI PLICA 2 NEVCILIA INA PALATINIATI I DE	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RNELPOTONCDF R	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	KandePeakinessexcilidindPolarUPEUZI RiMiNetUUE	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF	KandePeakinessExcilidindPolarDPEDZPLRMSUNNetUDE	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF R	KangePeakinesse xciugingPolarUPEUZSUNNetUDE	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF R	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF R	KangePeakinesse xciugingPolarUPSARNetUDE	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF R	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 F	KandeSeaSurfaceHeidhtAnomaivOceanFD3PLKiviNetCDF	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 R	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
		The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD S	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF S	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF S	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:

1

**L1B and L2 Product name** n/a

P2P Product name CS\_OFFL\_SIR\_GOP\_2\_\_20221013T233845\_20221014T002824\_C002