

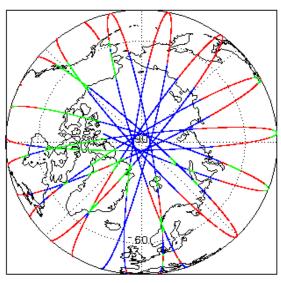
## 1. Overview

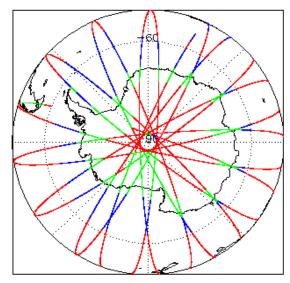
Report Production:	10-Jul-2020	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data	

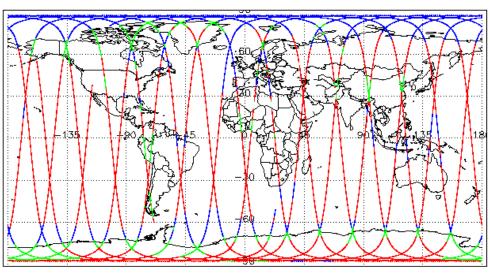
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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 7.1 and 7.2	See Section 7.1 and 7.2

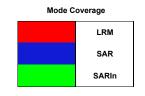
N	lission / Instru	ment News
	11-Jun-2020	None
	12-Jun-2020	None
	13-Jun-2020	Nothing planned

# 2. Global Coverage









## 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

## 4. GOP Level 1B Data Quality Check

### 4.1 L1B Product Format Check

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

#### 4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The I1b\_proc\_flag\_hr flag is currently set all L1B GOPR and GOPN products because the I1b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.

Number of products with errors:

#### 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:

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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_20200612T033716_20200612T034908_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_20200612T015717_20200612T023323_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20200612T060932_20200612T062010_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20200612T101411_20200612T104115_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T042425_20200612T042543_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T091349_20200612T091411_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T172844_20200612T173100_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T190420_20200612T190934_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T214404_20200612T214525_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20200612T222020_20200612T222448_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20200612T113731_20200612T114124_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20200612T133030_20200612T133316_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20200612T172204_20200612T172341_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20200612T190934_20200612T191557_C001	Loss of Echo	The tracking echo is missing for one or more records

## 5. GOP Level 2 Data Quality Check

### 5.1 L2 Product Format Check

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

Number of products with errors:

0

### 5.2 L2 Product Header Analysis

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

Number of products with errors:

### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

### 5.4 L2 Auxiliary Correction Error Check

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

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Number of products with errors:

Product Test Failed Description

CS_OFFL_SIR_GOPN_2_20200612T000455_20200612T000614_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_20200612T001144_20200612T001459_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_20200612T010259_20200612T010349_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_20200612T014420_20200612T014534_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_20200612T015040_20200612T015355_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20200612T032514_20200612T032751_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_20200612T032944_20200612T033527_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_20200612T042033_20200612T042159_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_20200612T050337_20200612T050649_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_20200612T055943_20200612T060050_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_20200612T064245_20200612T064447_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_20200612T073856_20200612T074444_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20200612T082217_20200612T082335_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_20200612T100136_20200612T100256_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_20200612T114125_20200612T114450_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_20200612T124007_20200612T124237_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_20200612T132030_20200612T132350_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_20200612T132907_20200612T133029_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_20200612T141017_20200612T141243_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_20200612T150758_20200612T150913_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_20200612T155041_20200612T155146_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_20200612T164503_20200612T164702_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_20200612T172844_20200612T173100_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_20200612T190420_20200612T190934_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_20200612T200412_20200612T200634_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_20200612T204215_20200612T204756_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_20200612T213347_20200612T213510_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_20200612T231347_20200612T231511_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_20200612T232309_20200612T232420_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_20200612T005325_20200612T010134_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_20200612T010134_20200612T010259_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_20200612T023324_20200612T024031_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_20200612T024032_20200612T024453_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_20200612T041312_20200612T041922_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_20200612T041922_20200612T042032_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_20200612T050146_20200612T050337_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20200612T055255_20200612T055653_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_20200612T055653_20200612T055943_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_20200612T073324_20200612T073856_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_20200612T091412_20200612T091913_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_20200612T105119_20200612T110113_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_20200612T123154_20200612T124007_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_20200612T141244_20200612T142025_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_20200612T155146_20200612T155856_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_20200612T173100_20200612T173424_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_20200612T173424_20200612T173759_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_20200612T190934_20200612T191557_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_20200612T204756_20200612T205317_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_20200612T205317_20200612T205709_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_20200612T222449_20200612T223232_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_20200612T033716_20200612T034908_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

## 5.6 L2 Measurement Quality Flag Check

## L2 Quality Flags (20Hz)

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

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20200612T000125_20200612T000240_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_20200612T000615_20200612T001143_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_20200612T001834_20200612T005325_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_20200612T010431_20200612T010612_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20200612T012400_20200612T014112_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_20200612T015717_20200612T023323_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_DEF_SIR_GOPM_2_PERONITIONING_202001710019_COST Alliander Rangs_and Radioactorit Caulty CS_DEF_SIR_GOPM_2_PERONITIONING_202001710019_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020001710019_COST CS_DEF_SIR_GOPM_2_PERONITIONING_202001710019_COST CS_DEF_SIR_GOPM_2_PERONITIONING_202001710019_COST Alliander Rangs_and Debadosinin Caulty CS_DEF_SIR_GOPM_2_PERONITIONING_202001710110_COST CS_DEF_SIR_GOPM_2_PERONITIONING_202001710111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_2020017100111_COST CS_DEF_SIR_GOPM_2_PERONITIONING_202001	CS_OFFL_SIR_GOPM_2_20200612T025536_20200612T031816_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.
ode (1974), SRR_00PM_2_20200812T03533_20200812T035404_C001  CS_0PFL_SRR_00PM_2_20200812T03533_20200812T035404_C001  CS_0PFL_SRR_00PM_2_20200812T03533_20200812T035404_C001  CS_0PFL_SRR_00PM_2_20200812T03533_20200812T035404_C001  CS_0PFL_SRR_00PM_2_20200812T03533_20200812T04308_C001  CS_0PFL_SRR_00PM_2_20200812T03533_20200812T04308_C001  CS_0PFL_SRR_00PM_2_20200812T04503_20200812T04308_C001  CS_0PFL_SRR_00PM_2_20200812T050303_20200812T04303_C001  CS_0PFL_SRR_00PM_2_20200812T050303_20200812T04303_C001  CS_0PFL_SRR_00PM_2_20200812T050303_20200812T050333_C001  CS_0PFL_SRR_00PM_2_20200812T050333_20200812T050333_C001  CS_0PFL_SRR_00PM_2_20200	CS_OFFL_SIR_GOPM_2_20200612T033716_20200612T034908_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20000812T005132_2000812T005432_C001  CS_OFFL_SIR_GOPM_2_20000812T005432_2000812T043132_C001  CS_OFFL_SIR_GOPM_2_20000812T005432_2000812T043132_C001  CS_OFFL_SIR_GOPM_2_20000812T04533_2000812T04332_C001  CS_OFFL_SIR_GOPM_2_20000812T04533_2000812T04523_C001  CS_OFFL_SIR_GOPM_2_2000812T04533_2000812T04533_C001  CS_OFFL_SIR_GOPM_2_2000812T04533_2000812T04533_C001  CS_OFFL_SIR_GOPM_2_2000812T04533_2000812T04533_C001  CS_OFFL_SIR_GOPM_2_2000812T04533_2000812T04533_C001  CS_OFFL_SIR_GOPM_2_2000812T05333_2000812T05313_C001  CS_OFFL_SIR_GOPM_2_20	CS_OFFL_SIR_GOPM_2_20200612T035030_20200612T035128_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality. COCO Almoster Range and Backscatter Quality Tags have been after the COCO Allmeter Range and Backscatter Quality Tags have been after the COCO Allmeter Range and Backscatter Quality Tags have been after the COCO Allmeter Range and Backscatter Quality Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after Range SIAL SIAL stage and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Quality. Tags have been after the COCO Allmeter Range and Backscatter Qu	CS_OFFL_SIR_GOPM_2_20200612T035135_20200612T035404_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and flaudscattler Quality, OCOG Allimeter Range and Backscatter Quality Flags have been and been compared to more records.  CS_OFFL_SIR_GOPM_2_20200812T04503_2020612T045923_C001  CS_OFFL_SIR_GOPM_2_20200812T059590_2020612T045923_C001  CS_OFFL_SIR_GOPM_2_20200812T059590_2020612T059590_C001  CS_OFFL_SIR_GOPM_2_	CS_OFFL_SIR_GOPM_2_20200612T035846_20200612T041312_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_GOPM_2_20200612T06090_20200612T063136_C001  CS_OFFL_SIR_GOPM_2_20200612T050905_20200612T062009_C001  CS_OFFL_SIR_GOPM_2_20200612T050092_20200612T063010_C001  CS_OFFL_SIR_GOPM_2_20200612T050092_20200612T063010_C001  CS_OFFL_SIR_GOPM_2_20200612T050092_20200612T063010_C001  CS_OFFL_SIR_GOPM_2_20200612T063032_20200612T063030_C001  CS_OFFL_SIR_GOPM_2_20200612T063032_20200612T063030_C001  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063030_C001  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T064234_C001  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T064234_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T064234_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T064014_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T064014_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T064014_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060032_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T0603624_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T0603624_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T0603624_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T062030_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T062030_C001  CS_OFFL	CS_OFFL_SIR_GOPM_2_20200612T042613_20200612T044308_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20200612T063022_20200612T063012_000612T063035_CO01  CS_OFFL_SIR_GOPM_2_20200612T063022_20200612T063112_000612T063035_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063112_000612T063035_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063036_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063035_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063036_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063036_CO01  CS_OFFL_SIR_GOPM_2_20200612T063035_20200612T063042_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T0600143_CO01  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T0600162_CO01  CS_OFFL_SIR_GOPM_2_20200612T0600012T06000162T06000162T060000000000	CS_OFFL_SIR_GOPM_2_20200612T044503_20200612T045923_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality COCG Allimeter Range and Backscatter Quality Flags have been Allimeter Range and Backscatter Quality Flags have been Allimeter Range and Backscatter Quality Flags and the OCOG Allimeter Range and Backscatter Quality Flags have been and Backscatter Quality Flags have been Set (and by All Part of Pa	CS_OFFL_SIR_GOPM_2_20200612T050950_20200612T051356_C001		
and Backscatter Quality. COGA Allimeter Range and Backscatter Quality Flags have been Allimeter Range. SHA, SWH and Backscatter Quality Flags have been Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range and Backscatter Quality. COGA Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range and Backscatter Quality. COGA Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range and Backscatter Quality. COGA Allimeter Range. SHA, SWH and Backscatter Quality. COGA Allimeter Range an	CS_OFFL_SIR_GOPM_2_20200612T051607_20200612T052909_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been altimeter Range Quality. CCOG Backscatter Quality. CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The CCGA Altimeter Range and Backscatter Quality Fla	CS_OFFL_SIR_GOPM_2_20200612T053029_20200612T053110_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been Backscatter Quality Flags have been Altimeter Range Altimeter Range Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_C001  CS_OFFL_SIR_GOPM_2_20200612T060932_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T060932_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T062013_C00012T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T062733_20200612T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T06207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T08207_C001  CS_OFFL_SIR_G	CS_OFFL_SIR_GOPM_2_20200612T053311_20200612T053330_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Sackscatter Quality  CS_OFFL_SIR_GOPM_2_20200612T060932_20200612T062010_C001  CS_OFFL_SIR_GOPM_2_20200612T062733_20200612T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T062733_20200612T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T063617_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065355_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065355_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C	CS_OFFL_SIR_GOPM_2_20200612T053335_20200612T054234_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range RopM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T07545_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_202	CS_OFFL_SIR_GOPM_2_20200612T060050_20200612T060143_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Set for one or more records.  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001  CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075405_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082035_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082355_20	CS_OFFL_SIR_GOPM_2_20200612T060932_20200612T062010_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082353_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082353_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082353_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082353_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082535_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082535_20200612T08253	CS_OFFL_SIR_GOPM_2_20200612T062733_20200612T063617_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001	CS_OFFL_SIR_GOPM_2_20200612T063624_20200612T064011_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20200612T07535_20200612T071108_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001	CS_OFFL_SIR_GOPM_2_20200612T064447_20200612T065258_C001		
CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.  OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPM_2_20200612T065535_20200612T071108_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001  CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001	CS_OFFL_SIR_GOPM_2_20200612T075401_20200612T075743_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_GOPM_2_20200612T075745_20200612T082007_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_GOPM_2_20200612T082335_20200612T082538_C001		
CS_OFFL_SIR_GOPM_2_20200612T082616_20200612T083133_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_20200612T082616_20200612T083133_C001		
CS_OFFL_SIR_GOPM_2_20200612T083538_20200612T085926_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_GOPM_2_20200612T083538_20200612T085926_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20200612T093211_20200612T095851_C001  Ocean Altimeter Range, SSHA, SWH 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_20200612T093211_20200612T095851_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20200612T100542_20200612T101145_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_20200612T100542_20200612T101145_C001		
CS_OFFL_SIR_GOPM_2_20200612T101411_20200612T104115_C001  Ocean Altimeter Range, SSHA, SWH 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_20200612T101411_20200612T104115_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_GOPM_2_20200612T104557_20200612T105119_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
00_0110_0110_001110_0010010101010101010	Altimeter Range and Backscatter Quality	set for one or more records.
CS_OFFL_SIR_GOPM_2_20200612T110500_20200612T113730_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_20200612T114451_20200612T115017_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_20200612T120100_20200612T120644_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_20200612T122902_20200612T123154_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_20200612T124353_20200612T125255_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_20200612T125540_20200612T131725_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_20200612T132350_20200612T132454_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_20200612T132458_20200612T132906_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_20200612T133317_20200612T135043_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_20200612T140848_20200612T140857_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_20200612T142026_20200612T145548_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_20200612T150411_20200612T150758_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_20200612T151453_20200612T154614_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_20200612T154752_20200612T155040_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_20200612T155856_20200612T161333_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_20200612T161935_20200612T162025_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_20200612T162127_20200612T163528_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_20200612T163734_20200612T164250_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_20200612T164309_20200612T164322_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_20200612T165308_20200612T170629_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_20200612T170843_20200612T171018_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_20200612T171037_20200612T172203_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_20200612T172341_20200612T172510_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_20200612T180013_20200612T181418_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_20200612T181700_20200612T182201_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_20200612T182238_20200612T182339_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_20200612T183642_20200612T184300_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_20200612T184731_20200612T184747_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_20200612T184751_20200612T185221_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_20200612T185505_20200612T190053_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_20200612T193203_20200612T195251_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_20200612T195727_20200612T200117_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_20200612T200813_20200612T203246_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_20200612T210815_20200612T213233_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_20200612T213511_20200612T214031_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_20200612T214743_20200612T222019_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_20200612T224420_20200612T230342_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_20200612T230702_20200612T231154_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_20200612T231511_20200612T232308_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_20200612T232735_20200613T000019_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20200612T071951_20200612T072336_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20200612T085926_20200612T090023_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20200612T091216_20200612T091245_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20200612T183139_20200612T183348_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T060241_20200612T060425_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T074445_20200612T074710_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T083408_20200612T083537_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T115135_20200612T115326_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T132455_20200612T132457_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T140441_20200612T140847_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T150405_20200612T150411_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_GOPR_2_20200612T173424_20200612T173759_C001	0 3.	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T222449_20200612T223232_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.

## L2 Quality Flags (20Hz PLRM)

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20200612T000455_20200612T000614_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_20200612T011146_20200612T011258_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_20200612T012139_20200612T012400_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_20200612T032514_20200612T032751_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_20200612T042033_20200612T042159_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_20200612T054234_20200612T054453_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_20200612T062203_20200612T062732_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_20200612T064245_20200612T064447_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_20200612T071951_20200612T072336_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_20200612T072419_20200612T072451_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_20200612T073856_20200612T074444_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_20200612T082538_20200612T082616_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_20200612T083133_20200612T083408_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_20200612T101146_20200612T101309_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_20200612T110114_20200612T110500_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_20200612T124007_20200612T124237_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_20200612T132907_20200612T133029_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_20200612T135044_20200612T135410_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_20200612T141017_20200612T141243_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_20200612T145734_20200612T145917_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_20200612T172844_20200612T173100_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_20200612T174512_20200612T174810_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_20200612T184300_20200612T184731_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_20200612T190420_20200612T190934_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_20200612T192529_20200612T192928_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_20200612T195418_20200612T195726_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_20200612T203615_20200612T203818_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_20200612T204215_20200612T204756_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_20200612T205801_20200612T205923_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_20200612T210406_20200612T210543_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_20200612T222020_20200612T222448_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_20200612T223459_20200612T223533_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_20200612T231347_20200612T231511_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_20200612T000240_20200612T000455_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_20200612T001459_20200612T001834_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_20200612T005325_20200612T010134_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_20200612T010813_20200612T011035_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_20200612T011259_20200612T011506_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_20200612T014113_20200612T014420_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_20200612T015356_20200612T015716_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_20200612T023324_20200612T024031_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_20200612T031816_20200612T032514_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_20200612T041312_20200612T041922_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_20200612T041922_20200612T042032_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_20200612T044309_20200612T044503_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_20200612T045923_20200612T050106_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_20200612T055255_20200612T055653_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.

	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_GOPR_2_20200612T055653_20200612T055943_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T060241_20200612T060425_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20200612T060458_20200612T060706_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_20200612T060850_20200612T060932_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_20200612T073209_20200612T073324_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_20200612T073324_20200612T073856_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_20200612T074445_20200612T074710_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_20200612T082007_20200612T082217_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_20200612T091007_20200612T091216_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_20200612T091412_20200612T091913_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_20200612T095851_20200612T100136_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_20200612T105119_20200612T110113_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_20200612T115135_20200612T115326_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_20200612T122502_20200612T122743_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_20200612T123154_20200612T124007_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_20200612T133030_20200612T133316_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_20200612T135905_20200612T135938_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_20200612T140120_20200612T140441_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_20200612T141244_20200612T142025_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_20200612T145549_20200612T145733_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_20200612T150914_20200612T151249_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_20200612T155146_20200612T155856_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_20200612T164703_20200612T165308_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_20200612T170629_20200612T170843_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_20200612T172204_20200612T172341_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_20200612T172510_20200612T172601_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_20200612T172625_20200612T172844_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_20200612T173100_20200612T173424_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_20200612T173424_20200612T173759_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_20200612T190934_20200612T191557_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_20200612T193027_20200612T193203_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_20200612T200634_20200612T200813_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_20200612T204756_20200612T205317_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_20200612T205317_20200612T205709_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_20200612T214525_20200612T214743_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_20200612T222449_20200612T223232_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_20200612T231155_20200612T231346_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_20200612T232421_20200612T232735_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 & 1Hz PLRM)

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

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

Number of products with errors:

### 5.8 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

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

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

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

Number of products with errors: 145

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

### 6.1 P2P Product Format Check

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

Number of products with errors:

## 6.2 P2P Product Header Analysis

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

Number of products with errors:

### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

## 6.4 P2P Auxiliary Correction Error Check

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

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

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

> 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_2_20200611T232113_20200612T001048_C002	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_GOP_2_20200612T001048_20200612T010027_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_20200612T010027_20200612T015002_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_20200612T015002_20200612T023940_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2_20200612T023940_20200612T032915_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_20200612T032915_20200612T041854_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_20200612T041854_20200612T050829_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_20200612T050829_20200612T055807_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_20200612T055807_20200612T064742_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_20200612T064742_20200612T073721_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_20200612T073721_20200612T082656_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_2_20200612T082656_20200612T091635_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_20200612T091635_20200612T100610_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_20200612T100610_20200612T105548_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_220200612T105548_20200612T114523_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_220200612T114523_20200612T123502_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_20200612T123502_20200612T132437_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_20200612T132437_20200612T141415_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_20200612T141415_20200612T150350_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_20200612T150350_20200612T155329_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_20200612T155329_20200612T164304_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_20200612T164304_20200612T173242_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_20200612T173242_20200612T182217_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_20200612T182217_20200612T191156_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_20200612T191156_20200612T200131_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_20200612T200131_20200612T205110_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_20200612T205110_20200612T214045_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_20200612T214045_20200612T223023_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_20200612T223023_20200612T231958_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_20200612T231958_20200613T000937_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

## 6.5 P2P Measurement Confidence Data Check

Number of products with errors:

## 6.6 P2P Measurement Quality Flag Check

### P2P Quality Flags (20Hz)

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

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors: 30

#### P2P Quality Flags (20Hz PLRM)

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors: 2

### P2P Quality Flags (1 Hz & 1Hz PLRM)

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors: 30

### 6.8 P2P Ocean Retracking Quality Check

### P2P Retracking Flags (20Hz)

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

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

Number of products with errors: 29

### 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

## 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	154	154	6	148	0
SIR_GOPR1B	101	101	0	101	0
SIR_GOPN1B	95	95	2	93	0
SIR_GOPM_2	154	154	102	52	0
SIR_GOPR_2	101	101	18	82	1
SIR_GOPN_2	95	95	35	60	0
SIR GOP P2P	29	29	0	28	1

## 7.1 QCC Errors

Number of QCC reports with errors:

Product Type RLOBOPNCDF

2

RLOBOPNCDF

Total	number	of	occurrences	of	each e	rror

SIR_GOPR_2	1	1	1	1							
<b>Product Type</b>	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-

Test Description Key:				
Abbreviation	Test name	Details		
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7		
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7		
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7		
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7		

### 7.2 QCC Warnings

Number of QCC reports with warnings

2217

Total	number	of	occurrences	of	each	warning

	Total number of occurrences of each warning						
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_GOPM1B	148	0	0	0	0	0	0
SIR_GOPM_2	0	0	38	41	0	43	0
SIR_GOPN1B	90	0	0	0	0	0	0
SIR_GOPN_2	0	0	8	33	2	23	25
SIR_GOPR1B	100	0	0	0	0	0	0
SIR_GOPR_2	0	1	39	55	0	40	37

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCE	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	36	1	36	0	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	20	0	0	0	29	0	34
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	22	0	0	55	0	61	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	29	0	0	8	27	0	6
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	30	22	43	56	31
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	0	54	0	2	72	46	7
		•		•		•	,

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_GOPM1B	0	0	0	0	0	0	

1		1	I-	1-	I_	I_	1- 1	1
	SIR_GOPM_2	37	0	2	0	0	0	
	SIR_GOPN1B	0	0	0	0	46	1	
	SIR_GOPN_2	28	32	15	1	0	0	
	SIR_GOPR1B	0	0	0	0	101	2	
	SIR_GOPR_2	36	49	5	1	0	0	

		I	I	I			
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCI	RBSZOPOEPNCDF
SIR GOP 2	18	28	29	2	29	15	29

Product Type RNEI	LPOTONCDF	RPEPOPFDPLRMSINNCDI	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOP_2_ 1	1	17	29	24	26	29	18

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
SIR GOP 2	24	29	17	18	29		

Test Description Key:	est Description Key:							
Abbreviation	Test name	Details						
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter						
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)						
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees						
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees						
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only						
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean						
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean						
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean						
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean						
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean						
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
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						
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample						
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter						
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter						

# 7.3 Missing QCC Reports

Number of products with missing QCC reports: