

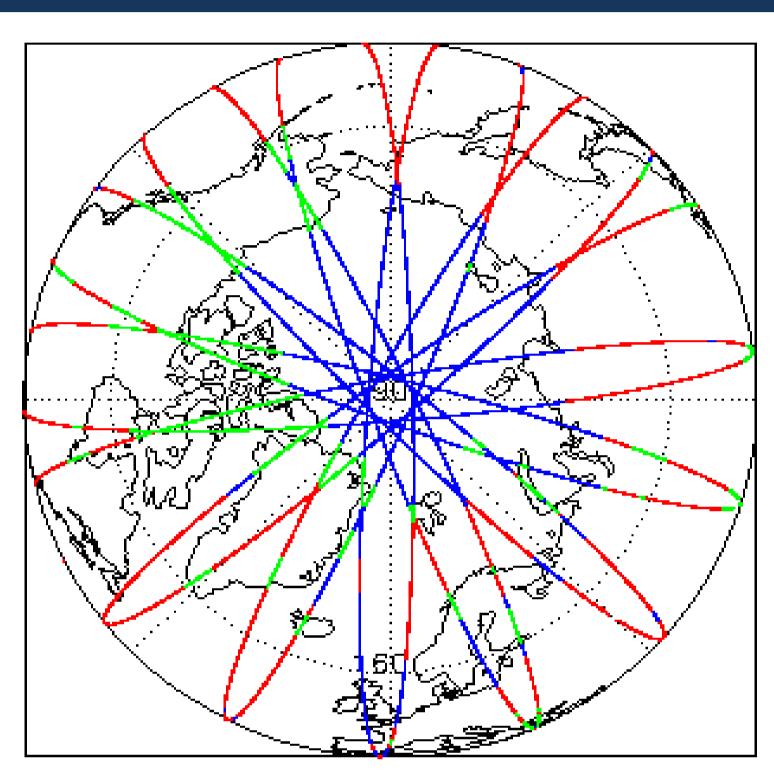
# 1. Overview

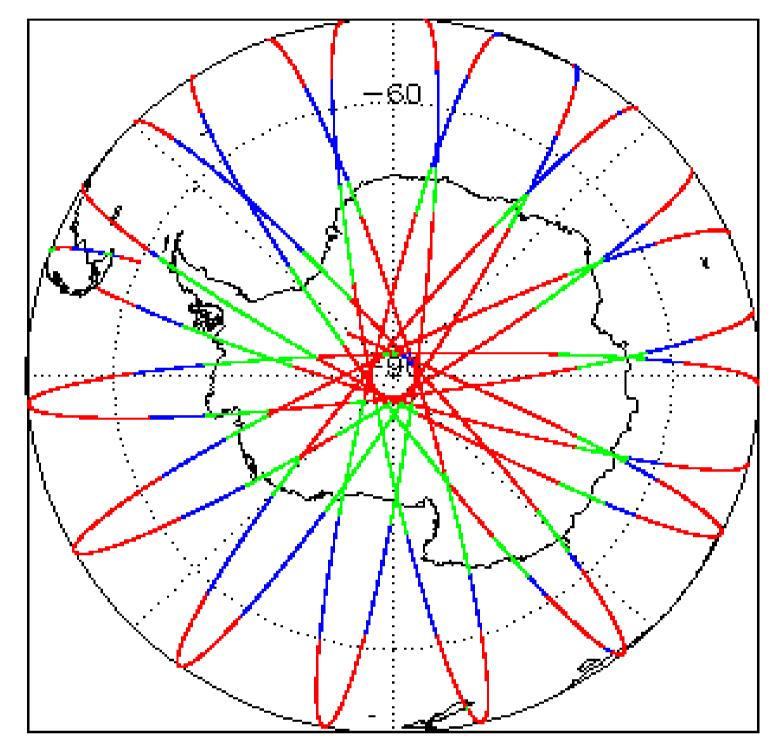
Report Production:	14-Oct-2020
Processor Used:	CryoSat Ocean Processor
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data

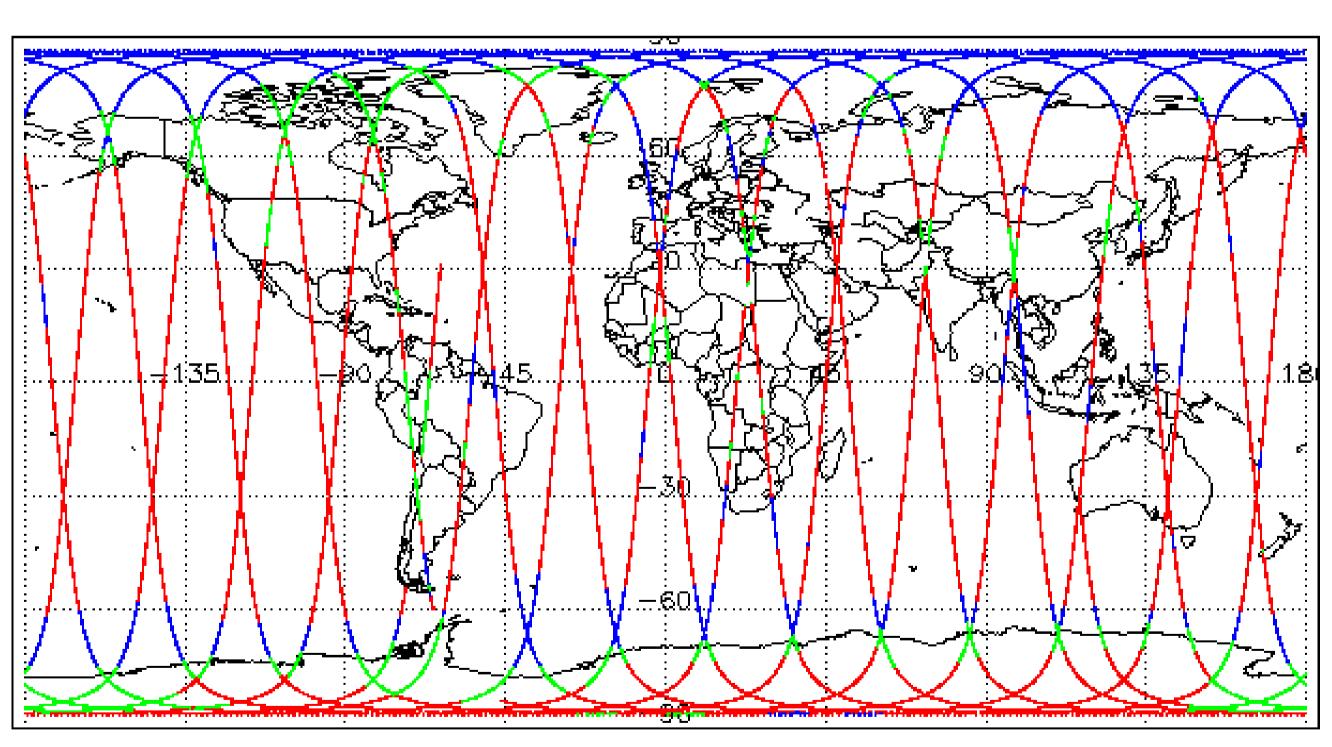
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

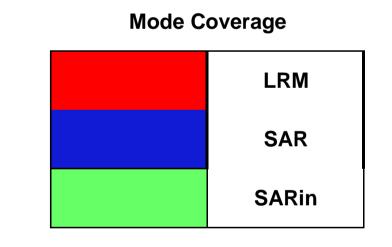
Mission /	Instru	ment News
10-Oct-2	2020 I	None
11-Oct-2	2020	None
12-Oct-2	2020 I	Nothing planned

# 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. IOP 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 IOPR and IOPN 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:

0

### **4.4 L1B Auxiliary Correction Error Check**

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

Number of products with errors:

0

#### 4.5 L1B Measurement Confidence Data Check

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

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

**Number of products with errors:** 

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#### 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 products over land, but this is to be expected.

**Number of products with errors:** 

20

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20201011T031746_20201011T034431_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20201011T113359_20201011T114330_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20201011T122625_20201011T122810_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T012446_20201011T012949_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T060524_20201011T060717_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T111450_20201011T111656_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T125111_20201011T125539_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T181044_20201011T181107_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T203650_20201011T203659_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20201011T233512_20201011T234056_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T035844_20201011T040059_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T043821_20201011T044653_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T060450_20201011T060524_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T061055_20201011T061415_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T070245_20201011T070625_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T074708_20201011T075011_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T093741_20201011T094457_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T153118_20201011T153347_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T165701_20201011T165935_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20201011T184905_20201011T185316_C001	Loss of Echo	The tracking echo is missing for one or more records

# 5. IOP 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: 0

## **5.3 L2 Auxiliary Data File Usage Check**

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

Number of products with errors:

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### **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.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 40

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20201011T031746_20201011T034431_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T012446_20201011T012949_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)
CS_OFFL_SIR_IOPN_2_20201011T020730_20201011T020919_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T021733_20201011T021955_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)
CS_OFFL_SIR_IOPN_2_20201011T030452_20201011T030909_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T052706_20201011T052909_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)
CS_OFFL_SIR_IOPN_2_20201011T052909_20201011T053040_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)
CS_OFFL_SIR_IOPN_2_20201011T070625_20201011T070944_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)
CS_OFFL_SIR_IOPN_2_20201011T071457_20201011T071621_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T075713_20201011T075828_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)
CS_OFFL_SIR_IOPN_2_20201011T085401_20201011T085509_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T093631_20201011T093741_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20201011T103104_20201011T103255_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)
CS_OFFL_SIR_IOPN_2_20201011T111450_20201011T111656_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)
CS_OFFL_SIR_IOPN_2_20201011T125111_20201011T125539_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20201011T134009_20201011T134255_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)
CS_OFFL_SIR_IOPN_2_20201011T143015_20201011T143402_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T161055_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20201011T184558_20201011T184904_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)
CS_OFFL_SIR_IOPN_2_20201011T201858_20201011T202144_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)
CS_OFFL_SIR_IOPN_2_20201011T215938_20201011T220211_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)
CS_OFFL_SIR_IOPN_2_20201011T225448_20201011T225608_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)
CS_OFFL_SIR_IOPR_2_20201011T011830_20201011T012445_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)
CS_OFFL_SIR_IOPR_2_20201011T030009_20201011T030452_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)
CS_OFFL_SIR_IOPR_2_20201011T043821_20201011T044653_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)
CS_OFFL_SIR_IOPR_2_20201011T061803_20201011T062551_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)
CS_OFFL_SIR_IOPR_2_20201011T075828_20201011T080611_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)

CS_OFFL_SIR_IOPR_2_20201011T093742_20201011T094457_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)
CS_OFFL_SIR_IOPR_2_20201011T111657_20201011T112400_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)
CS_OFFL_SIR_IOPR_2_20201011T125539_20201011T130248_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPR_2_20201011T143402_20201011T144250_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)
CS_OFFL_SIR_IOPR_2_20201011T161056_20201011T161834_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)
CS_OFFL_SIR_IOPR_2_20201011T175028_20201011T175652_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)
CS_OFFL_SIR_IOPR_2_20201011T175652_20201011T175850_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)
CS_OFFL_SIR_IOPR_2_20201011T192845_20201011T193552_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)
CS_OFFL_SIR_IOPR_2_20201011T193552_20201011T193732_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)
CS_OFFL_SIR_IOPR_2_20201011T211004_20201011T211449_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)
CS_OFFL_SIR_IOPR_2_20201011T211449_20201011T211613_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)
CS_OFFL_SIR_IOPR_2_20201011T224751_20201011T225333_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)
CS_OFFL_SIR_IOPR_2_20201011T225333_20201011T225448_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)

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

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

Number of products with errors:

0

# 5.6 L2 Measurement Quality Flag Check

# L2 Quality Flags (20Hz)

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

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

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

Number of products with errors:

90

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20201010T234936_20201011T000747_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_IOPM_2_20201011T002337_20201011T002544_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_IOPM_2_20201011T003048_20201011T003843_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_IOPM_2_20201011T004158_20201011T005606_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_IOPM_2_20201011T013034_20201011T013245_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_IOPM_2_20201011T013318_20201011T020542_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_IOPM_2_20201011T021151_20201011T021732_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_IOPM_2_20201011T022201_20201011T024531_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_IOPM_2_20201011T031746_20201011T034431_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_IOPM_2_20201011T035129_20201011T035600_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_IOPM_2_20201011T040059_20201011T042728_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_IOPM_2_20201011T043541_20201011T043820_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_IOPM_2_20201011T045121_20201011T052223_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_IOPM_2_20201011T053040_20201011T053615_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_IOPM_2_20201011T054009_20201011T054400_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20201011T061514_20201011T061737_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_IOPM_2_20201011T063002_20201011T070244_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_IOPM_2_20201011T070945_20201011T071457_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_IOPM_2_20201011T072026_20201011T073641_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_IOPM_2_20201011T075439_20201011T075546_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_IOPM_2_20201011T080611_20201011T082953_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_IOPM_2_20201011T083103_20201011T084133_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_IOPM_2_20201011T084648_20201011T084945_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_IOPM_2_20201011T085002_20201011T085400_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_IOPM_2_20201011T085920_20201011T092504_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_IOPM_2_20201011T092519_20201011T093255_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_IOPM_2_20201011T093405_20201011T093630_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_IOPM_2_20201011T094457_20201011T095924_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_IOPM_2_20201011T100405_20201011T102049_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_IOPM_2_20201011T102326_20201011T102844_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_IOPM_2_20201011T103936_20201011T105222_C001	• 1	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20201011T105436_20201011T111328_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_IOPM_2_20201011T113359_20201011T114330_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_IOPM_2_20201011T114605_20201011T115939_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_IOPM_2_20201011T120252_20201011T120756_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_IOPM_2_20201011T121628_20201011T121725_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_IOPM_2_20201011T123351_20201011T123815_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_IOPM_2_20201011T123938_20201011T124650_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_IOPM_2_20201011T124813_20201011T125027_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_IOPM_2_20201011T131904_20201011T132039_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_IOPM_2_20201011T132247_20201011T133837_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_IOPM_2_20201011T134255_20201011T134714_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_IOPM_2_20201011T135445_20201011T141700_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_IOPM_2_20201011T144250_20201011T144357_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_IOPM_2_20201011T145357_20201011T151739_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_IOPM_2_20201011T152106_20201011T152629_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_IOPM_2_20201011T152635_20201011T153000_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_IOPM_2_20201011T153347_20201011T160037_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_IOPM_2_20201011T160153_20201011T160526_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_IOPM_2_20201011T161955_20201011T162009_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_IOPM_2_20201011T162900_20201011T163048_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_IOPM_2_20201011T163053_20201011T165242_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_IOPM_2_20201011T165249_20201011T165700_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_IOPM_2_20201011T170059_20201011T170908_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_IOPM_2_20201011T171439_20201011T174640_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_IOPM_2_20201011T175851_20201011T180051_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_IOPM_2_20201011T183016_20201011T183500_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_IOPM_2_20201011T184039_20201011T184557_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_IOPM_2_20201011T185317_20201011T191409_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_IOPM_2_20201011T191655_20201011T192833_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_IOPM_2_20201011T193757_20201011T194231_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_IOPM_2_20201011T195819_20201011T200303_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.

After a Page on Procession Cash year for Common and Cash Age (1997). And Cash Blockostor Cash Page on Cash Age (1997). And Cash Blockostor Cash Page on Cash Bloc			
COUNT ON CONTROL SELECTION CONTROL CONTROL SELECTION CONTROL C	CS_OFFL_SIR_IOPM_2_20201011T200451_20201011T201433_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C2_OFT_SR_ION_2_X0010117_X002_X0010117_X002_X000   C3_OFT_SR_ION_2_X001017_X002_X001017_X002_X000   C4_OFT_SR_ION_2_X001017_X002_X0000117_X002_X0000117_X002_X0000017_X0000   C4_OFT_SR_ION_2_X001017_X002_X0000117_X0000_X00000000000000000000000	CS_OFFL_SIR_IOPM_2_20201011T203212_20201011T203650_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFF_SR_IONA_2_800**C11729291_2000911729360_COC  CS_OFF_SR_IONA_2_800**C11729291_200091729360_COC  CS_OFF_SR_IONA_2_800**C11729291_200091729360_COC  CS_OFF_SR_IONA_2_800**C11729291_200091729360_COC  CS_OFF_SR_IONA_2_800**C11729391_200091729360_COC  CS_OFF_SR_IONA_2_800**C11729391_200091729360_COC  CS_OFF_SR_IONA_2_800**C11729360_COC  CS_OFF	CS_OFFL_SIR_IOPM_2_20201011T203659_20201011T205850_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS DPE ST 1079 2 000101172/051 200101172/052 2010   CS DPE ST 1079 2 000101172/051 200101172/052 2010   CS DPE ST 1079 2 000101172/051 200101172/052 2010   CS DPE ST 1079 2 000101172/052 201011172/052 2010   CS DPE ST 1079 2 000101172/052 20101172/052 2010   CS DPE ST 1079 2 000101172/052 20101172/052 2010   CS DPE ST 1079 2 000101172/052 20101172/052	CS_OFFL_SIR_IOPM_2_20201011T205955_20201011T210704_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Col. Dept.   Sile   Dept.   2   20010111721722   Col.	CS_OFFL_SIR_IOPM_2_20201011T212121_20201011T212820_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
0.2. OFFL_SIR_LOPML2_22201011*7221183_22001  Ober Affront Rings_ SSNA_SW4 and Movement County County Flags and Selection County Flags a	CS_OFFL_SIR_IOPM_2_20201011T212841_20201011T215237_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB_OFFL_SIR_OFFL_2 2021011122164_0.0011	CS_OFFL_SIR_IOPM_2_20201011T221134_20201011T221623_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscarier Quality. COOS Armers Resign Armers Resig	CS_OFFL_SIR_IOPM_2_20201011T221717_20201011T222726_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
For incompany 2 abdothor 1 2 abdothor 2 abdothor 2 abdothor 2 abdothor 2 abdothor 2 abdothor 1 2 abdothor 1 abdothor 2 abdothor 1 abdothor 2 abdothor 1 abdothor 2 abdothor 1 abdothor 2 abdothor	CS_OFFL_SIR_IOPM_2_20201011T223047_20201011T223843_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and das-oscater Quality, COCO SOFFL SIR JOPM 2 2201/011723032 20201011723445 CO01 CS_OFFL_SIR_JOPM 2 2201/011723032 20201011723445 CO01 CS_OFFL_SIR_JOPM 2 20201011724007_20201017123454 CO01 CS_OFFL_SIR_JOPM 2 202010117253511 20201017200455 CO01 CS_OFFL_SIR_JOPM 2 20201011705200_20201017105350 CO01 CS_OFFL_SIR_JOPM 2 2020101171105200_20201017105350 CO01 CS_OFFL_SIR_JOPM 2 202010117111427 20201011711450 CO01 CS_OFFL_SIR_JOPM 2 20201011711427 20201011711450 CO01 CS_OFFL_SIR_JOPM 2 202010117114465 20201011712870 CO01 CS_OFFL_SIR_JOPM 2 202010117114465 20201011712870 CO01 CS_OFFL_SIR_JOPM 2 20201011714465 202010117145143 CO01 CS_OFFL_SIR_JOPM 2 20201011714465 202010117145143 CO01 CS_OFFL_SIR_	CS_OFFL_SIR_IOPM_2_20201011T225609_20201011T230019_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
and Behastate Quality COCQ Altrineter Range and Behastate Quality Flags have been set for one or more records.  CS OFFL SIR IOPM 2 202010117284087 20201011728414 CO01  CS OFFL SIR IOPM 2 202010117284080 20201011708404 CO01  CS OFFL SIR IOPM 2 202010117082011 (2020101200048) CO01  Altrineter Range and Bedescater Quality Flags have been set for one or more records.  CS OFFL SIR IOPM 2 20201011708200 20201011708200 CO01  CS OFFL SIR IOPM 2 20201011711427 20201011711480 CO01  CS OFFL SIR IOPM 2 20201011711480 C001011714810 C001  CS OFFL SIR IOPM 2 20201011711480 C001011714810 C001  CS OFFL SIR IOPM 2 20201011711480 C001011714810 C001  CS OFFL SIR IOPM 2 2020101171480 C001011714810 C001011714810 C001011714810 C001011714810 C001011	CS_OFFL_SIR_IOPM_2_20201011T230134_20201011T231518_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS OFFL SIR IOPM 2 202010117234350 202010117234814 CO01  Solicitation College Col	CS_OFFL_SIR_IOPM_2_20201011T232332_20201011T233445_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscalter Quality  CS_OFFL_SIR_IOPM_2_20201011T28911_202010127000488_C001  CS_OFFL_SIR_IOPM_2_20201011T28911_202010127000488_C001  CS_OFFL_SIR_IOPM_2_20201011T082998_20201011T083040_C001  CS_OFFL_SIR_IOPM_2_20201011T082998_20201011T083040_C001  CS_OFFL_SIR_IOPM_2_20201011T082998_20201011T083040_C001  CS_OFFL_SIR_IOPM_2_20201011T082998_20201011T083040_C001  CS_OFFL_SIR_IOPM_2_20201011T093299_20201011T083040_C001  CS_OFFL_SIR_IOPM_2_20201011T093299_20201011T08300_C001  CS_OFFL_SIR_IOPM_2_20201011T141427_20201011T180300_C001  CS_OFFL_SIR_IOPM_2_20201011T141427_20201011T180_C001  CS_OFFL_SIR_IOPM_2_20201011T141427_20201011T180_C001  CS_OFFL_SIR_IOPM_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPM_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPM_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPM_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPM_2_20201011T124813_C001  CS_OFFL_SIR_IOPM_2_20201011T124813_C001  CS_OFFL_SIR_IOPM_2_20201011T146542_20201011T146143_C001  CS_OFFL_SIR_IOPM_2_20201011T146542_20201011T146143_C001  CS_OFFL_SIR_IOPM_2_20201011T146542_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_20201011T16066_C001  CS_OFFL_SIR_IOPM_2_2	CS_OFFL_SIR_IOPM_2_20201011T234057_20201011T234322_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS OFFL SIR IOPN 2 202010117052909 202010117053000 C001  CS OFFL SIR IOPN 2 202010117033259 202010117053300 C001  CS OFFL SIR IOPN 2 202010117033259 202010117053300 C001  CS OFFL SIR IOPN 2 202010117033259 202010117053300 C001  CS OFFL SIR IOPN 2 202010117111427 20201011711450 C001  CS OFFL SIR IOPN 2 20201011711448 20201011712410 C001  CS OFFL SIR IOPN 2 202010117114480 20201011712410 C001  CS OFFL SIR IOPN 2 202010117114480 202010117124513 C001  CS OFFL SIR IOPN 2 202010117144854 202010117145143 C001  CS OFFL SIR IOPN 2 202010117144854 202010117145143 C001  CS OFFL SIR IOPN 2 202010117144854 2020101171605C C001  CS OFFL SIR IOPN 2 20201011716052 20201011716052 C001  CS OFFL SIR IOPN 2 20201011716052 C001  CS OFFL SIR IOPR 2 20201011716053 C001  CS OFFL SIR IOPR 2 20201011716053 C001  CS OFFL SIR IOPR 2 20201011716053 C001  CS OFFL SIR IOPR 2 20201011716054 C001  CS OFFL SIR IOPR 2 20201011716054 C001  CS OFFL SIR IOPR 2 20201011716055 C001  CS	CS_OFFL_SIR_IOPM_2_20201011T234350_20201011T234814_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T093259_20201011T093300_C001  CS_OFFL_SIR_IOPN_2_20201011T093259_20201011T093300_C001  CS_OFFL_SIR_IOPN_2_20201011T111427_20201011T111450_C001  CS_OFFL_SIR_IOPN_2_20201011T111427_20201011T111450_C001  CS_OFFL_SIR_IOPN_2_20201011T111427_20201011T111450_C001  CS_OFFL_SIR_IOPN_2_20201011T11427_20201011T111450_C001  CS_OFFL_SIR_IOPN_2_20201011T11427_20201011T112180_C001  CS_OFFL_SIR_IOPN_2_20201011T1144550_2001  CS_OFFL_SIR_IOPN_2_20201011T1144550_20201011T124813_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T144513_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T16055_C001  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T16055_C001  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T00245_20201011	CS_OFFL_SIR_IOPM_2_20201011T235111_20201012T000458_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_IOPN_2_20201011T111427_20201011T111450_C001  BCG_Altimeter Range Quality, OCOG Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPN_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPN_2_20201011T12450_20201011T124813_C001  CS_OFFL_SIR_IOPN_2_20201011T12450_20201011T124813_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T124813_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T161055_C001  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T161055_C001  CS_OFFL_SIR_IOPN_2_20201011T180062_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180062_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180062_20201011T070245	CS_OFFL_SIR_IOPN_2_20201011T052909_20201011T053040_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPN_2_20201011T121748_20201011T121810_C001  CS_OFFL_SIR_IOPN_2_20201011T124650 20201011T124813 C001  CS_OFFL_SIR_IOPN_2_20201011T124650 20201011T124813 C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T16055_C001  CS_OFFL_SIR_IOPN_2_20201011T16055_20201011T16055_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T070625_C001  CS_OFFL_SIR_IOPN_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T07024	CS_OFFL_SIR_IOPN_2_20201011T093259_20201011T093300_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_IOPN_2_20201011T124850_20201011T124813_C001  CS_OFFL_SIR_IOPN_2_20201011T14954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T14954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T14954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T140526_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T180526_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T00025_C001  CS_OFFL_SIR_IOPN_2_20201011T000245_20201011T00025_C001  CS_OFFL_SIR_IOPN_2_20201011T000245_20201011T00025_C001  CS_OFFL_SIR_IOPR_2_20201011T000245_20201011T00025_C001  CS_OFFL_SIR_IOPR_2_20	CS_OFFL_SIR_IOPN_2_20201011T111427_20201011T111450_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Add Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T145143_C001  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T161055_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T00052_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011T00052_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011T00052_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011T00052_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011T00052_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011T00055_C001  CS_OFFL_SIR_IOPN_2_20201011	CS_OFFL_SIR_IOPN_2_20201011T121748_20201011T121810_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T161055_C001  Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPN_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_S	CS_OFFL_SIR_IOPN_2_20201011T124650_20201011T124813_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_2020	CS_OFFL_SIR_IOPN_2_20201011T144954_20201011T145143_C001	_	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20201011T180104_C001  Backscatter Quality  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and	CS_OFFL_SIR_IOPN_2_20201011T160526_20201011T161055_C001	3	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20201011T070245_20201011T070625_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags	CS_OFFL_SIR_IOPN_2_20201011T180052_20201011T180104_C001	_	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001  and Backscatter Quality, 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_IOPR_2_20201011T070245_20201011T070625_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_IOPR_2_20201011T084134_20201011T084338_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20201011T085509_20201011T085920_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality set for one or more records.	CS_OFFL_SIR_IOPR_2_20201011T085509_20201011T085920_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_IOPR_2_20201011T212821_20201011T212840_C001	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20201011T221030_20201011T221134_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.

Product	Test Failed	Description
- Todaot		Description
CS_OFFL_SIR_IOPN_2_20201011T000748_20201011T001349_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_IOPN_2_20201011T003844_20201011T004031_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_IOPN_2_20201011T012446_20201011T012949_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_IOPN_2_20201011T021129_20201011T021151_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_IOPN_2_20201011T024532_20201011T024600_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_IOPN_2_20201011T025418_20201011T025433_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_IOPN_2_20201011T025821_20201011T025838_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_IOPN_2_20201011T030452_20201011T030909_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_IOPN_2_20201011T030951_20201011T031114_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_IOPN_2_20201011T031406_20201011T031702_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_IOPN_2_20201011T044653_20201011T045121_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_IOPN_2_20201011T053615_20201011T053730_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_IOPN_2_20201011T060524_20201011T060717_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_IOPN_2_20201011T060814_20201011T060825_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_IOPN_2_20201011T062552_20201011T062731_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_IOPN_2_20201011T062835_20201011T063002_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_IOPN_2_20201011T070625_20201011T070944_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_IOPN_2_20201011T071457_20201011T071621_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_IOPN_2_20201011T073642_20201011T073959_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_IOPN_2_20201011T075713_20201011T075828_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_IOPN_2_20201011T111427_20201011T111450_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_IOPN_2_20201011T111450_20201011T111656_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_IOPN_2_20201011T113022_20201011T113359_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_IOPN_2_20201011T122300_20201011T122624_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_IOPN_2_20201011T122810_20201011T123351_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_IOPN_2_20201011T125111_20201011T125539_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_IOPN_2_20201011T131207_20201011T131508_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_IOPN_2_20201011T134009_20201011T134255_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_IOPN_2_20201011T134918_20201011T135223_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_IOPN_2_20201011T142813_20201011T142934_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_IOPN_2_20201011T143015_20201011T143402_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_IOPN_2_20201011T144357_20201011T144519_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_IOPN_2_20201011T145322_20201011T145356_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_IOPN_2_20201011T151952_20201011T152106_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_IOPN_2_20201011T153000_20201011T153118_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_IOPN_2_20201011T162010_20201011T162104_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_IOPN_2_20201011T174641_20201011T174814_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_IOPN_2_20201011T174854_20201011T175028_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_IOPN_2_20201011T180052_20201011T180104_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_IOPN_2_20201011T180227_20201011T180349_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_IOPN_2_20201011T180808_20201011T180825_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_IOPN_2_20201011T184558_20201011T184904_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_IOPN_2_20201011T195448_20201011T195819_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_IOPN_2_20201011T201858_20201011T202144_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_IOPN_2_20201011T202459_20201011T202834_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_IOPN_2_20201011T210950_20201011T211004_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_IOPN_2_20201011T211732_20201011T211826_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_IOPN_2_20201011T220406_20201011T220644_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_IOPN_2_20201011T220847_20201011T221030_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_IOPN_2_20201011T224001_20201011T224146_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_IOPN_2_20201011T225448_20201011T225608_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_IOPN_2_20201011T234814_20201011T234953_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_IOPR_2_20201011T005607_20201011T005829_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20201011T005829_20201011T010412_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_IOPR_2_20201011T011830_20201011T012445_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_IOPR_2_20201011T030009_20201011T030452_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_IOPR_2_20201011T034432_20201011T034701_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_IOPR_2_20201011T035845_20201011T040059_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_IOPR_2_20201011T043821_20201011T044653_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_IOPR_2_20201011T052224_20201011T052705_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_IOPR_2_20201011T061055_20201011T061415_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_IOPR_2_20201011T061803_20201011T062551_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_IOPR_2_20201011T062732_20201011T062834_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_IOPR_2_20201011T070245_20201011T070625_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_IOPR_2_20201011T074708_20201011T075011_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_IOPR_2_20201011T075546_20201011T075713_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_IOPR_2_20201011T075828_20201011T080611_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_IOPR_2_20201011T084134_20201011T084338_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_IOPR_2_20201011T085509_20201011T085920_C001	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_IOPR_2_20201011T093742_20201011T094457_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_IOPR_2_20201011T103255_20201011T103936_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM  Ocean Altimeter Bange, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20201011T105223_20201011T105436_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_IOPR_2_20201011T111657_20201011T112400_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_IOPR_2_20201011T121957_20201011T122028_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_IOPR_2_20201011T125539_20201011T130248_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_IOPR_2_20201011T131633_20201011T131904_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_IOPR_2_20201011T135224_20201011T135445_C001	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_IOPR_2_20201011T143402_20201011T144250_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_IOPR_2_20201011T151739_20201011T151952_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_IOPR_2_20201011T161056_20201011T161834_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_IOPR_2_20201011T171022_20201011T171439_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_IOPR_2_20201011T175028_20201011T175652_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_IOPR_2_20201011T175652_20201011T175850_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_IOPR_2_20201011T183501_20201011T183913_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_IOPR_2_20201011T184905_20201011T185316_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_IOPR_2_20201011T192845_20201011T193552_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_IOPR_2_20201011T194842_20201011T194850_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_IOPR_2_20201011T201434_20201011T201857_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_IOPR_2_20201011T202834_20201011T203211_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_IOPR_2_20201011T210831_20201011T210949_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_IOPR_2_20201011T211449_20201011T211613_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_IOPR_2_20201011T211646_20201011T211731_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_IOPR_2_20201011T215238_20201011T215937_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_IOPR_2_20201011T221030_20201011T221134_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_IOPR_2_20201011T222830_20201011T223047_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_IOPR_2_20201011T224751_20201011T225333_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.

## 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: 57

#### 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 IOPR and IOPN products over sea ice, but this is to be expected.

152

0

Number of products with errors:

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

#### **6.1 P2P Product Format Check**

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

Number of products with errors:

#### **6.2 P2P Product Header Analysis**

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

Number of products with errors: 0

### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors: 0

#### **6.4 P2P Auxiliary Correction Error Check**

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

Currently, there are some common auxiliary correction errors raised in the Level 2 products 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.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 28

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220201011T003324_20201011T012303_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)
CS_OFFL_SIR_IOP_220201011T012303_20201011T021239_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)
CS_OFFL_SIR_IOP_220201011T021239_20201011T030218_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)
CS_OFFL_SIR_IOP_220201011T030218_20201011T035153_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)
CS_OFFL_SIR_IOP_220201011T035153_20201011T044133_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)
CS_OFFL_SIR_IOP_220201011T044133_20201011T053108_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)
CS_OFFL_SIR_IOP_220201011T053108_20201011T062048_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)
CS_OFFL_SIR_IOP_220201011T062048_20201011T071023_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)
CS_OFFL_SIR_IOP_220201011T071023_20201011T080002_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)
CS_OFFL_SIR_IOP_220201011T080002_20201011T084937_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)
CS_OFFL_SIR_IOP_220201011T084937_20201011T093917_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220201011T093917_20201011T102852_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)
CS_OFFL_SIR_IOP_220201011T102852_20201011T111832_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)
CS_OFFL_SIR_IOP_220201011T111832_20201011T120807_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)
CS_OFFL_SIR_IOP_220201011T120807_20201011T125746_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records

CS_OFFL_SIR_IOP_220201011T125746_20201011T134721_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220201011T134721_20201011T143701_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)
CS_OFFL_SIR_IOP_220201011T143701_20201011T152636_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)
CS_OFFL_SIR_IOP_220201011T152636_20201011T161616_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)
CS_OFFL_SIR_IOP_220201011T161616_20201011T170551_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)
CS_OFFL_SIR_IOP_220201011T170551_20201011T175530_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)
CS_OFFL_SIR_IOP_220201011T175530_20201011T184505_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)
CS_OFFL_SIR_IOP_220201011T184505_20201011T193445_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)
CS_OFFL_SIR_IOP_220201011T193445_20201011T202420_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)
CS_OFFL_SIR_IOP_220201011T202420_20201011T211400_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)
CS_OFFL_SIR_IOP_220201011T211400_20201011T220335_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)
CS_OFFL_SIR_IOP_220201011T220335_20201011T225314_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)
CS_OFFL_SIR_IOP_220201011T225314_20201011T234249_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)

#### 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

acts 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.

0

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: 29

## 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 IOPR and IOPN products over sea ice, but this is to be expected.

Number of products with errors: 28

### 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 IOPR and IOPN products over sea ice, but this is to be expected.

Number of products with errors: 30

# 7. IOP 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_IOPM1B	168	168	7	161	0
SIR_IOPR1B	108	112	5	107	0
SIR_IOPN1B	112	108	0	108	0
SIR_IOPM_2	168	168	113	55	0
SIR_IOPR_2	108	112	38	74	0
SIR_IOPN_2	112	108	33	74	1
SIR IOP P2P	29	29	0	28	1

## 7.1 QCC Errors

#### Number of QCC reports with errors:

8

#### Total number of occurrences of each error

Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_IOPR_2	1	1	1	1							
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-

est 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

SIR\_IOP\_2\_

Number of QCC reports with warnings

2227

Total number of occurrences of each warning

Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_IOPM1B	161	0	0	0	0	0	0
SIR_IOPM_2	0	0	35	37	0	47	0
SIR_IOPN1B	107	0	0	0	0	0	0
SIR_IOPN_2	0	0	9	31	2	26	34
SIR_IOPR1B	108	0	0	0	0	0	0
SIR_IOPR_2	0	1	41	39	1	35	32

Product Type	RBSZOPOEPNCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNCDI	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	41	33	0	0	0	0	28
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	21	0	0	23	0	38	0
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	25	0	45	0	52	0	0

Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	0	0	4	30	0	2	36
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	25	22	47	58	36	32
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	40	0	0	63	45	10	40

Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_IOPM1B	0	0	1	0	0	1	
SIR_IOPM_2	0	4	1	0	0	0	
SIR_IOPN1B	0	0	0	0	53	2	
SIR_IOPN_2	33	15	1	0	0	0	
SIR_IOPR1B	0	0	0	0	108	9	
SIR_IOPR_2	52	0	0	2	0	0	

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_IOP_2_	16	29	29	4	29	1 1 <b>G</b>	29

Product Type	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOP_2_	19	29	20	18	29	17	25

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-	-
SIR_IOP_2_	29	19	14	29			
Product Type	-	-	-	-	-	-	-

Test Description Key:		
Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
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
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
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean

RSWHOEPFDNCDF		The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for
		latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for
DE		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
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
	·	
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter
COCTODINODI		ine dequence deanter energia de ene ingrier (medale 1836 i) with regard to the provious dequence deanter

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0