

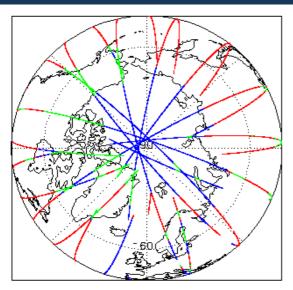
## 1. Overview

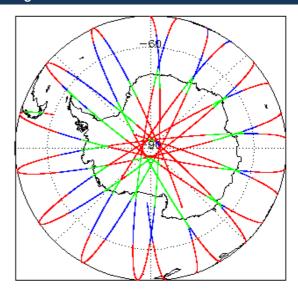
Report Production:	19-Nov-2021	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Near Real Time Ocean Products (NOI L1B & L2 Science Data	

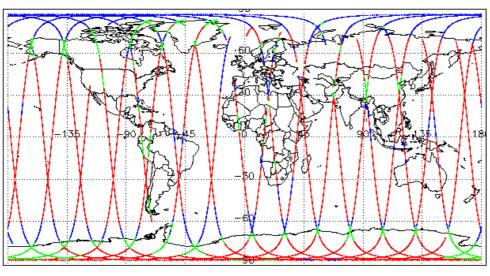
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement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

Mission / Instrument News	
17-Nov-2021	None
18-Nov-2021	None
19-Nov-2021	Nothing planned

# 2. Global Coverage









## 3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
Star Tracker(s) in use:	Star Tracker 1

## 4. NOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

#### 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.

Dynamic Atmospheric Correction: The DAC is missing in all products because the auxiliary files required are not available in time for processing. This known and expected behaviour.

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 NOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors:

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:

14

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_202111118T000331_202111118T003830_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20211118T082103_20211118T084814_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T023035_20211118T023150_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_202111118T040057_202111118T040115_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T040547_20211118T040653_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_202111118T054501_202111118T055010_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T104622_20211118T104953_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T121611_20211118T121852_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T135651_20211118T135754_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T153453_20211118T153709_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T181040_20211118T181249_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20211118T203845_20211118T203920_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20211118T072016_20211118T072521_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20211118T085410_20211118T085518_C001	Loss of Echo	The tracking echo is missing for one or more records

### 5. NOP 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.

Wind Model File Usage: This file is currently not included in all L2 products.

Number of products with errors:

٥

### 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.
- > 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:

Product  CS_OFFL_SIR_NOPM_2_20211118T041212_20211118T042629_C001  Mean Dynamic Topography (1)  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (solution 1) and the tidal corrections for one or	n Dynamic more records it for one or Mean Dynamic
CS_OFFL_SIR_NOPM_2_20211118T151620_20211118T153116_C001  Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Topography (solution 1) and the tidal corrections for one or	more records It for one or Mean Dynamic Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T0321353_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MsS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MsS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MsS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MsS height (solution 1) and the Man Dynamic Topography height (solution 1) for one or more records  There is an error with the Man Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)	Mean Dynamic
Topography (1)  Topography height (solution 1) for one or more records  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MSS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Man Sea Surface (1), Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the MSS height (solution 1) and the Man Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Man Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Man Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Man Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)	Mean Dynamic
Topography (1)  Topography height (solution 1) for one or more records  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide (GOT)  CS_OFFL_SIR_NOPN_2_20211118T032633_20211118T032753_C001  CS_OFFL_SIR_NOPN_2_20211118T030907_20211118T031250_C001  CS_OFFL_SIR_NOPN_2_20211118T032900_20211118T032135_C001  Topography (1)  Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the N Topography (1)  Topography height (solution 1) and the N Topography height (solution 1) for one or more records  There is an error with the MSS height (solution 1) and the N Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the Mean Dynamic Topography height (solution 1) for one or more records  There is an error with the Mean Dynamic Topography (1)  Topography height (solution 1) for one or more records  There is an error with the MSS height (solution 1) and the N Topography height (solution 1) for one or more records  There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)	•
CS_OFFL_SIR_NOPN_2_20211118T022633_20211118T022753_C001  Topography (1), Total Geocentric Ocean Topography height (solution 1) and the Total Geocentric Ocean Tide (GOT)  CS_OFFL_SIR_NOPN_2_20211118T030907_20211118T031250_C001  CS_OFFL_SIR_NOPN_2_20211118T032000_20211118T032135_C001  Topography (1), Total Geocentric Ocean Topography height (solution 1) and the Total Geocentric Ocean Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Nopography height (solution 1) for one or more records  There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Topography height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography (1)	n Dynamic
Topography (1)  Topography height (solution 1) for one or more records  CS_OFFL_SIR_NOPN_2_20211118T030907_20211118T031250_C001  Topography (1)  Topography height (solution 1) for one or more records  There is an error with the Mean Dynamic Topography (1)	
	Mean Dynamic
	t for one or
CS_OFFL_SIR_NOPN_2_20211118T040547_20211118T040653_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Topography height (solution 1) and the Normal Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T044849_20211118T045046_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	
CS_OFFL_SIR_NOPN_2_20211118T062822_20211118T062940_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	
CS_OFFL_SIR_NOPN_2_20211118T094735_20211118T095057_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Normal Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T095622_20211118T095740_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T112635_20211118T112955_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Machine Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T113515_20211118T113638_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heighmore records	t for one or
Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Topography (solution 1) and the tidal corrections for one or	
CS_OFFL_SIR_NOPN_2_20211118T131352_20211118T131520_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Machine Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T135651_20211118T135754_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Management Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T144209_20211118T144346_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T145111_20211118T145313_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the North Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPN_2_20211118T153453_20211118T153709_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Machine Topography height (solution 1) for one or more records	Mean Dynamic
Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	
CS_OFFL_SIR_NOPN_2_20211118T181040_20211118T181249_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T184823_20211118T185405_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T202652_20211118T203105_C001  Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or	
CS_OFFL_SIR_NOPN_2_20211118T212004_20211118T212128_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T225934_20211118T230100_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heighmore records	t for one or
CS_OFFL_SIR_NOPN_2_20211118T230613_20211118T230914_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Normal Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPR_2_20211118T030802_20211118T030907_C001 Mean Sea Surface (1) There is an error with the MSS height (solution 1) for one of	r more records
CS_OFFL_SIR_NOPR_2_20211118T033831_20211118T033912_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPR_2_20211118T035908_20211118T040056_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPR_2_20211118T055010_20211118T055218_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heighmore records	t for one or
CS_OFFL_SIR_NOPR_2_20211118T072016_20211118T072521_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the North Topography height (solution 1) for one or more records	Mean Dynamic
CS_OFFL_SIR_NOPR_2_20211118T084819_20211118T084903_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or
CS_OFFL_SIR_NOPR_2_20211118T085410_20211118T085518_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography heigh more records	t for one or

CS_OFFL_SIR_NOPR_2_20211118T085754_20211118T090724_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T103802_20211118T104622_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T121852_20211118T122638_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T135754_20211118T140505_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T153709_20211118T154359_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T171542_20211118T172103_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T185405_20211118T190342_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211118T203105_20211118T203845_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

#### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

### 5.6 L2 Measurement Quality Flag Check

CS OFFL SIR NOPM 2 20211118T031548 20211118T032000 C001

CS OFFL SIR NOPM 2 20211118T032204 20211118T033412 C001

CS\_OFFL\_SIR\_NOPM\_2\_20211118T033913\_20211118T034835\_C001

#### L2 Quality Flags (20Hz)

Product

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.

Test Failed

Description

- > 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:

Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS\_OFFL\_SIR\_NOPM\_2\_20211118T000331\_20211118T003830\_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. OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_NOPM\_2\_20211118T003849\_20211118T003907\_C001 Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS\_OFFL\_SIR\_NOPM\_2\_20211118T005048\_20211118T005105\_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. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_NOPM\_2\_20211118T010124\_20211118T012418\_C001 Altimeter Range and Backscatter Quality set for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags. CS\_OFFL\_SIR\_NOPM\_2\_20211118T014321\_20211118T015440\_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. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_NOPM\_2\_20211118T015505\_20211118T015836\_C001 Altimeter Range and Backscatter Quality set for one or more records. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_NOPM\_2\_20211118T015839\_20211118T020006\_C001 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 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG CS OFFL SIR NOPM 2 20211118T020448 20211118T021349 C001 Altimeter Range and Backscatter Quality OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_NOPM\_2\_20211118T021437\_20211118T021454\_C001 Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been CS OFFL SIR NOPM 2 20211118T021456 20211118T021559 C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS\_OFFL\_SIR\_NOPM\_2\_20211118T023153\_20211118T024856\_C001 and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality set for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPM 2 20211118T025106 20211118T030537 C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been

Altimeter Range and Backscatter Quality

OCOG Altimeter Range Quality, OCOG

Ocean Altimeter Range, SSHA, SWH

Ocean Altimeter Range, SSHA, SWH

Altimeter Range and Backscatter Quality set for one or more records.

Altimeter Range and Backscatter Quality set for one or more records.

and Backscatter Quality, OCOG

and Backscatter Quality, OCOG

Backscatter Quality

The OCOG Altimeter Range and Backscatter Quality Flags have been set

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags

and the OCOG Altimeter Range and Backscatter Quality Flags have been

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags

and the OCOG Altimeter Range and Backscatter Quality Flags have been

for one or more records.

CS_OFFL_SIR_NOPM_2_20211118T040653_20211118T040738_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_NOPM_2_20211118T041212_20211118T042629_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_NOPM_2_20211118T043322_20211118T044638_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_NOPM_2_20211118T045046_20211118T045902_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_NOPM_2_20211118T050214_20211118T051750_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_NOPM_2_20211118T060003_20211118T062548_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_NOPM_2_20211118T063224_20211118T063730_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_NOPM_2_20211118T064200_20211118T070540_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_NOPM_2_20211118T073806_20211118T080355_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_NOPM_2_20211118T081148_20211118T081750_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_NOPM_2_20211118T082103_20211118T084814_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_NOPM_2_20211118T091055_20211118T094313_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_NOPM_2_20211118T095058_20211118T095622_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_NOPM_2_20211118T100042_20211118T100414_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_NOPM_2_20211118T103438_20211118T103802_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_NOPM_2_20211118T104958_20211118T105902_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_NOPM_2_20211118T110147_20211118T112314_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_NOPM_2_20211118T113106_20211118T113514_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_NOPM_2_20211118T114048_20211118T115156_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_NOPM_2_20211118T115206_20211118T115649_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_NOPM_2_20211118T122826_20211118T130158_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_NOPM_2_20211118T130511_20211118T131001_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_NOPM_2_20211118T131007_20211118T131014_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_NOPM_2_20211118T131021_20211118T131352_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_NOPM_2_20211118T132101_20211118T135240_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_NOPM_2_20211118T140554_20211118T140557_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_NOPM_2_20211118T140740_20211118T141943_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_NOPM_2_20211118T142530_20211118T144142_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_NOPM_2_20211118T144346_20211118T144900_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_NOPM_2_20211118T144907_20211118T144913_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_NOPM_2_20211118T145906_20211118T151240_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_NOPM_2_20211118T151620_20211118T153116_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_NOPM_2_20211118T155424_20211118T160445_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_NOPM_2_20211118T160625_20211118T162016_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_NOPM_2_20211118T162311_20211118T162812_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_NOPM_2_20211118T162850_20211118T162952_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_NOPM_2_20211118T163646_20211118T163804_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_NOPM_2_20211118T164138_202111118T164944_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_NOPM_2_20211118T165345_20211118T165833_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_NOPM_2_20211118T170826_20211118T170910_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_NOPM_2_20211118T170932_20211118T171001_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_NOPM_2_20211118T173724_20211118T175849_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_NOPM_2_20211118T180345_20211118T180729_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_NOPM_2_20211118T181443_20211118T184143_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_NOPM_2_20211118T191416_20211118T193807_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_NOPM_2_20211118T194128_20211118T194644_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_NOPM_2_20211118T194651_20211118T195017_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_NOPM_2_20211118T195419_20211118T202651_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_NOPM_2_20211118T205104_20211118T205735_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_NOPM_2_20211118T205741_20211118T210342_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_NOPM_2_20211118T210346_20211118T210909_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_NOPM_2_20211118T211319_20211118T211721_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

Ocean Altimeter Range, SSHA, SWH and Beackecatior Quality Flags and the COOG Altimeter Range, SSHA, SWH and Beackecatior Quality Flags have been set for one or more records.  S. OFFL_SIR_NOPN_2_20211118T19569_20211118T195083_C001118T19569_20211118T19569_20211118T19569_20211118T19569_20211118T19569_20211118T19569_20211118T19569_20211118T195	CS_OFFL_SIR_NOPM_2_20211118T212129_20211118T212921_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
and Backscatter Quality, OCOG Altmeter Range and Backscatter Quality Flags have been Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altmeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags and the OCOG Altmeter Range and Backscatter Quality Flags have been although and the OCOG Altmeter Range and Backscatter Quality Flags have been although and the OCOG Altmeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPN_2_20211118T115504_20211118T1070538_C001  CS_OFFL_SIR_NOPN_2_20211118T115504_20211118T10915_C001  CS_OFFL_SIR_NOPN_2_20211118T115243_20211118T10915_C001  CS_OFFL_SIR_NOPN_2_20211118T109145_20211118T091956_C001  CS_OFFL_SIR_NOPN_2_20211118T109145_20211118T091956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T091956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T091956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T091956_C001  CS_OFFL_SIR_NOPR	CS_OFFL_SIR_NOPM_2_20211118T213457_20211118T220643_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Altmeter Range and Backscatter Quality and the OCOG Altmeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20211118T230100_20211118T230613_C001  CS_OFFL_SIR_NOPM_2_20211118T230133_20211118T230425_C001  CS_OFFL_SIR_NOPM_2_20211118T231313_20211118T230425_C001  CS_OFFL_SIR_NOPM_2_20211118T231313_20211118T230425_C001  CS_OFFL_SIR_NOPM_2_20211118T230711_20211118T230488_C001  CS_OFFL_SIR_NOPM_2_20211118T230711_20211118T230618_C001  CS_OFFL_SIR_NOPM_2_20211118T230712_0011118T230618_C001  CS_OFFL_SIR_NOPM_2_20211118T230712_001118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T070540_20211118T070583_C001  CS_OFFL_SIR_NOPM_2_20211118T15550_20211118T135347_C001  CS_OFFL_SIR_NOPM_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPM_2_20211118T1071845_20211118T1071956_C001  CS_OFFL_SIR_NOPM_2_20211118T1071845_20211118T1071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CCCGA Altimeter Range Quality, OCOGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCCGA Record R	CS_OFFL_SIR_NOPM_2_20211118T221955_20211118T222059_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20211118T2301313_20211118T233425_C001  CS_OFFL_SIR_NOPM_2_20211118T231313_20211118T233425_C001  CS_OFFL_SIR_NOPM_2_20211118T233711_20211118T233448_C001  CS_OFFL_SIR_NOPM_2_20211118T233711_20211118T234848_C001  CS_OFFL_SIR_NOPM_2_20211118T233711_20211118T234848_C001  CS_OFFL_SIR_NOPM_2_20211118T235812_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000407_C001  CS_OFFL_SIR_NOPM_2_20211118T15650_20211118T120015_C001  CS_OFFL_SIR_NOPM_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPM_2_20211118T135243_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T0000047_C001  CS_OFFL_SIR_NOPM_2_20211118T0000000000000000000000000000000	CS_OFFL_SIR_NOPM_2_20211118T224637_20211118T225523_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Set for one or more records.  CS_OFFL_SIR_NOPM_2_20211118T23711_20211118T234848_C001  CS_OFFL_SIR_NOPM_2_20211118T235812_20211119T000047_C001  CS_OFFL_SIR_NOPM_2_20211118T070540_20211118T070638_C001  CS_OFFL_SIR_NOPN_2_20211118T070540_20211118T070638_C001  CS_OFFL_SIR_NOPN_2_20211118T155243_20211118T120015_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T071956_C001  CS_OFFL_SIR_NOPN_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPN_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_	CS_OFFL_SIR_NOPM_2_20211118T230100_20211118T230613_C001		
Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range	CS_OFFL_SIR_NOPM_2_20211118T231313_20211118T233425_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Altimeter Range and Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPN_2_20211118T070540_20211118T070638_C001  CS_OFFL_SIR_NOPN_2_20211118T15650_20211118T120015_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_	CS_OFFL_SIR_NOPM_2_20211118T233711_20211118T234848_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_NOPN_2_20211118T115650_20211118T120015_C001  Backscatter Quality  CS_OFFL_SIR_NOPN_2_20211118T115650_20211118T120015_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T1201012_C001  CS_OFFL_SIR_NOPN_2_20211118T071845_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T074734_C001  Backscatter Quality  CS_OFFL_SIR_NOPR_2_20211118T074845_20211118T074734_C001  Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPR_2_20211118T074845_20211118T074734_C001  Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPR_2_20211118T074845_20211118T074734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  COCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CCCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20211118T235812_20211119T000047_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001  CS_OFFL_SIR_NOPN_2_20211118T220820_20211118T221012_C001  CS_OFFL_SIR_NOPN_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001	CS_OFFL_SIR_NOPN_2_20211118T070540_20211118T070638_C001		
Backscatter Quality  Backscatter Quality  Backscatter Quality  For one or more records.  CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T221012_C001  Backscatter Quality  CS_OFFL_SIR_NOPN_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  Backscatter Quality  The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001  CS_OFFL_SIR_NOPR_2_20211118T144813_20211118T144818_C001	CS_OFFL_SIR_NOPN_2_20211118T115650_20211118T120015_C001		
Backscatter Quality  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001  CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001  CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001  CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001  CS_OFFL_SIR_NOPR_2_202111118T144913_20211118T144919_C001  CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001	CS_OFFL_SIR_NOPN_2_20211118T135243_20211118T135347_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  And Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001	CS_OFFL_SIR_NOPN_2_20211118T220820_20211118T221012_C001		
CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001  and Backscatter Quality, OCOG  Altimeter Range and Backscatter Quality Flags have been set for one or more records.  OCOG Altimeter Range and Backscatter Quality, OCOG  The OCOG Altimeter Range and Backscatter Quality Flags have been set	CS_OFFL_SIR_NOPR_2_20211118T071845_20211118T071956_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_NOPR_2_20211118T094313_20211118T094734_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_NOPR_2_20211118T144913_20211118T144919_C001		

## L2 Quality Flags (20Hz PLRM)

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

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

Number of products with errors: 82

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20211118T013117_20211118T013353_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_NOPN_2_20211118T013546_20211118T014211_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_NOPN_2_20211118T023035_20211118T023150_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_NOPN_2_20211118T030907_20211118T031250_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_NOPN_2_20211118T034835_20211118T035026_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_NOPN_2_20211118T042806_20211118T043257_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_NOPN_2_20211118T052547_20211118T052935_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_NOPN_2_20211118T054501_20211118T055010_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_NOPN_2_20211118T062822_20211118T062940_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_NOPN_2_20211118T063142_20211118T063223_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_NOPN_2_20211118T063731_20211118T064014_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_NOPN_2_20211118T080951_20211118T081148_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_NOPN_2_20211118T081750_20211118T081921_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_NOPN_2_20211118T090724_20211118T091055_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_NOPN_2_20211118T095622_20211118T095740_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_NOPN_2_20211118T101034_20211118T101156_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_NOPN_2_20211118T101645_20211118T101701_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_NOPN_2_20211118T104622_20211118T104953_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_NOPN_2_20211118T112635_20211118T112955_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_NOPN_2_20211118T115650_20211118T120015_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_NOPN_2_20211118T121611_20211118T121852_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_NOPN_2_20211118T131352_20211118T131520_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_NOPN_2_20211118T135651_20211118T135754_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_NOPN_2_20211118T144209_20211118T144346_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_NOPN_2_20211118T144932_20211118T144935_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_NOPN_2_20211118T155234_20211118T155424_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_NOPN_2_20211118T162124_20211118T162311_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_NOPN_2_20211118T162846_20211118T162850_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_NOPN_2_20211118T163805_20211118T164138_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_NOPN_2_20211118T164944_20211118T165344_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_NOPN_2_20211118T165833_20211118T165956_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_NOPN_2_20211118T170704_20211118T170826_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_NOPN_2_20211118T173041_20211118T173055_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_NOPN_2_20211118T180030_20211118T180344_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_NOPN_2_20211118T184823_20211118T185405_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_NOPN_2_20211118T191326_20211118T191415_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_NOPN_2_20211118T193956_20211118T194127_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_NOPN_2_20211118T202652_20211118T203105_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_NOPN_2_20211118T212922_20211118T213034_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_NOPN_2_20211118T220643_20211118T220728_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_NOPN_2_20211118T222244_20211118T222407_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_NOPN_2_20211118T230613_20211118T230914_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_NOPR_2_20211117T235959_20211118T000330_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_NOPR_2_20211118T005106_20211118T010124_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_NOPR_2_20211118T012419_20211118T013116_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_NOPR_2_20211118T015440_20211118T015505_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_NOPR_2_20211118T020007_20211118T020448_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_NOPR_2_20211118T024856_20211118T025105_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_NOPR_2_20211118T033412_20211118T033459_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_NOPR_2_20211118T044639_20211118T044848_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_NOPR_2_20211118T062549_20211118T062822_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_NOPR_2_20211118T072016_20211118T072521_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_NOPR_2_20211118T080355_20211118T080745_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_NOPR_2_20211118T084814_20211118T084815_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_NOPR_2_20211118T085754_20211118T090724_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_NOPR_2_20211118T094313_20211118T094734_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_NOPR_2_20211118T095740_20211118T100041_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_NOPR_2_20211118T102440_20211118T102820_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_NOPR_2_20211118T103057_20211118T103332_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_NOPR_2_20211118T103802_20211118T104622_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_NOPR_2_20211118T113102_20211118T113106_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_NOPR_2_20211118T113638_20211118T114048_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_NOPR_2_20211118T121852_20211118T122638_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_NOPR_2_20211118T131521_20211118T132100_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_NOPR_2_20211118T135754_20211118T140505_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_NOPR_2_20211118T145314_20211118T145906_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_NOPR_2_20211118T151240_20211118T151619_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_NOPR_2_20211118T153709_20211118T154359_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_NOPR_2_20211118T162016_20211118T162124_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_NOPR_2_20211118T171542_20211118T172103_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_NOPR_2_20211118T173619_20211118T173724_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_NOPR_2_20211118T175849_20211118T180030_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_NOPR_2_20211118T185405_20211118T190342_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_NOPR_2_20211118T195141_20211118T195419_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_NOPR_2_20211118T203105_20211118T203845_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_NOPR_2_20211118T203921_20211118T204332_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_NOPR_2_20211118T211721_20211118T212004_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_NOPR_2_20211118T213035_20211118T213456_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_NOPR_2_20211118T222205_20211118T2222244_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_NOPR_2_20211118T222408_20211118T222548_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_NOPR_2_20211118T225524_20211118T225934_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_NOPR_2_20211118T230914_20211118T231313_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

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

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

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

Number of products with errors:

174

## 5.7 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 falling at ocean/ land boundaries, but this is expected.

## 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 NOPR and NOPN products over sea ice, but this is to be expected.

129

Number of products with errors:

## 7. NOP 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_NOPM1B	192	192	3	189	0
SIR_NOPR1B	92	92	0	92	0
SIR_NOPN1B	95	95	2	93	0
SIR_NOPM_2	192	192	135	57	0
SIR_NOPR_2	92	92	25	67	0
SIR NOPN 2	95	95	36	59	0

### 7.1 QCC Errors

Number of QCC reports with errors:

0

# 7.2 QCC Warnings

Number of QCC reports with warnings

1732

Total number of occurrences of each warning

Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_NOPM1B	189	0	0	0	0	0	0
SIR_NOPM_2	0	41	40	1	46	0	35
SIR_NOPN1B	92	0	0	0	0	0	0
SIR_NOPN_2	0	12	32	6	23	29	18
SIR_NOPR1B	91	0	0	0	0	0	0
SIR NOPR 2	0	35	42	0	30	25	10

Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	1	35	0	0	0	0	25
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	0	23	0	33	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	0	0	49	0	55	0	0

Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	7	29	0	4	41
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	30	15	42	50	32	28
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	49	0	3	60	29	17	38

ſ	Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNODE	SPHRTASCNSNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
ļ		HOWHOLI I BI ENMINODI	HOMHOEI HOBI	OI IIIIIAOONONODI	OI III I ACCITORICA	COCIMINATIO	COCTOBININODI	CCCTCDNCDI
	SIR_NOPM1B	0	0	1	1	0	0	0
	SIR_NOPM_2	0	0	1	1	0	0	0
	SIR_NOPN1B	0	0	1	0	0	42	0
	SIR_NOPN_2	26	12	0	0	1	0	0
	SIR_NOPR1B	0	0	0	0	0	92	5
	SIR NOPR 2	50	4	0	0	3	0	0

Test Description Key:		
Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSIN NCDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMN CDF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees

SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0