

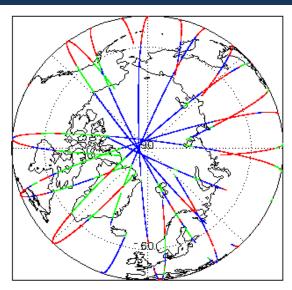
## 1. Overview

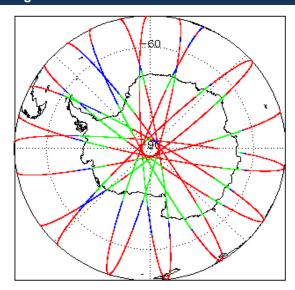
Report Production:	29-Jan-2021
Processor Used:	CryoSat Ocean Processor
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data

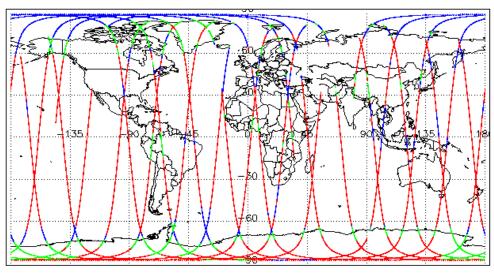
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement 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 7.1 and 7.2

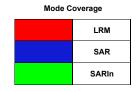
Mission / Instrument News		
27-Jan-2021	None	
28-Jan-2021	SIRAL unavailability on the 28/01/2021 from 10:25:30 UTC (to StandBy) to 10:40:00 UTC (to_LRM).	
29-Jan-2021	Nothing planned	

# 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:

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#### 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:

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#### 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:

0

#### 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:

17

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20210128T233206_20210128T233403_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T002258_20210128T002339_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T003558_20210128T003726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T034124_20210128T034328_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T051825_20210128T052244_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T052349_20210128T052456_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T062237_20210128T062405_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T065828_20210128T070355_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T134930_20210128T135131_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T184400_20210128T184450_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210128T202126_20210128T202632_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T065742_20210128T065828_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T120933_20210128T121142_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T135131_20210128T135318_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T165104_20210128T165218_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T183638_20210128T183720_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210128T215641_20210128T220147_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:

### 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:

0

#### 5.4 L2 Auxiliary Correction Error Check

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric 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.

Number of products with errors.	<b>1</b>	I
Product	Test Failed	Description There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_NOPM_2_20210128T001413_20210128T001506_C001	Mean Dynamic Topography (1)	more records
CS_OFFL_SIR_NOPM_2_20210128T055326_20210128T060849_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20210128T185317_20210128T190252_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T002258_20210128T002339_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20210128T011435_20210128T011749_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_NOPN_2_20210128T012302_20210128T012420_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T030209_20210128T030323_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_NOPN_2_20210128T034124_20210128T034328_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20210128T034424_20210128T034547_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_NOPN_2_20210128T051825_20210128T052244_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20210128T052349_20210128T052456_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_NOPN_2_20210128T061746_20210128T062019_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_NOPN_2_20210128T065828_20210128T070355_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20210128T075656_20210128T080028_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_NOPN_2_20210128T083826_20210128T084217_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_NOPN_2_20210128T124715_20210128T124838_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T125404_20210128T125718_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T142648_20210128T142802_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T143303_20210128T143622_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_NOPN_2_20210128T160739_20210128T161015_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_NOPN_2_20210128T161208_20210128T161835_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_NOPN_2_20210128T170256_20210128T170417_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20210128T174514_20210128T174911_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_NOPN_2_20210128T184212_20210128T184317_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 NOPN 2 20210128T192511 20210128T192706 C001		There is an array with the Mann Dynamic Tanannanhy hairbt for any av
C3_OFFL_SIK_NOFN_Z_202101201192311_202101201192700_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001	Mean Dynamic Topography (1)	more records  There is an error with the Mean Dynamic Topography height for one or more records
		more records  There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001 CS_OFFL_SIR_NOPN_2_20210128T202126_20210128T202632_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001  CS_OFFL_SIR_NOPN_2_20210128T202126_20210128T202632_C001  CS_OFFL_SIR_NOPN_2_20210128T210444_20210128T210603_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001  CS_OFFL_SIR_NOPN_2_20210128T202126_20210128T202632_C001  CS_OFFL_SIR_NOPN_2_20210128T210444_20210128T210603_C001  CS_OFFL_SIR_NOPN_2_20210128T224611_20210128T224811_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records  There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001  CS_OFFL_SIR_NOPN_2_20210128T202126_20210128T202632_C001  CS_OFFL_SIR_NOPN_2_20210128T210444_20210128T210603_C001  CS_OFFL_SIR_NOPN_2_20210128T224611_20210128T224811_C001  CS_OFFL_SIR_NOPR_2_20210128T001506_20210128T001609_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20210128T193526_20210128T193714_C001  CS_OFFL_SIR_NOPN_2_20210128T202126_20210128T202632_C001  CS_OFFL_SIR_NOPN_2_20210128T210444_20210128T210603_C001  CS_OFFL_SIR_NOPN_2_20210128T224611_20210128T224811_C001  CS_OFFL_SIR_NOPR_2_20210128T001506_20210128T001609_C001  CS_OFFL_SIR_NOPR_2_20210128T002614_20210128T003402_C001	Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic	more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  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_20210128T052456_20210128T053019_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_20210128T062019_20210128T062237_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210128T070355_20210128T071054_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_20210128T072924_20210128T073247_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T084217_20210128T084723_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_20210128T121521_20210128T121707_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T174429_20210128T174514_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210128T183545_20210128T183635_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T183638_20210128T183720_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T215641_20210128T220147_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_20210128T232439_20210128T232534_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T233036_20210128T233206_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20210128T233403_20210128T234350_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:

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### 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:

91

Test Failed Description	Product
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210128T002339_20210128T002425_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210128T003726_20210128T011156_C001
OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210128T011749_20210128T012302_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range 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_20210128T012459_20210128T012751_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range 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_20210128T012826_20210128T014412_C001
OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210128T014559_20210128T014932_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_20210128T015520_20210128T015632_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range 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_20210128T021643_20210128T022600_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range 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_20210128T022819_20210128T024435_C001
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range 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_20210128T024445_20210128T025032_C001
OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210128T025609_20210128T025751_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_20210128T025757_20210128T030209_C001
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have to come or more records.	CS_OFFL_SIR_NOPM_2_20210128T012826_20210128T014412_C001  CS_OFFL_SIR_NOPM_2_20210128T014559_20210128T014932_C001  CS_OFFL_SIR_NOPM_2_20210128T015520_20210128T015632_C001  CS_OFFL_SIR_NOPM_2_20210128T021643_20210128T022600_C001  CS_OFFL_SIR_NOPM_2_20210128T022819_20210128T022435_C001  CS_OFFL_SIR_NOPM_2_20210128T022819_20210128T025032_C001  CS_OFFL_SIR_NOPM_2_20210128T024445_20210128T025032_C001  CS_OFFL_SIR_NOPM_2_20210128T025609_20210128T025751_C001

and Backscatter Quality COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be compared to the COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be COCG All Inneter Range and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fill be compared and Backscatter Quality Flags have be fi	gs
and Backscater Quality, OCOG Allimeter Range and Backscater Quality Flags have be Misser Range (1997). See for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T043593_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T043234_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04304_20210128T043002_CO01  CS_OFFL_SIR_NOPM_2_20210128T04306_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T05002_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T05002_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T05002_C001  CS_OFFL_SIR_NOPM_2_20210128T05013_2010128T05182_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_2010128T056122_C001  CS_OFFL_SIR_NOPM_2_20210128T056123_C001  CS_OFFL_SIR_NOPM_2_20210128T056128_C001  CS_OFFL_SIR_NOPM_2_20210128T056128_C001  CS_OFFL_SIR_NOPM_2_20210128T056128_C001  CS_OFFL_SIR_NOPM_2_20210128T056128_C001  CS_OFFL_SIR_NOPM_2_20210128T06169_20210128T06164_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T06164_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T06164_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T06164_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T061640_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T061640_C001  CCS_OFFL_SIR_NOPM_2_20210128T06169_20210128T061640_C001  CCS_OFFL_SIR_NOPM_2_20210128T061692_20210128T061640_C001  CCS_OFFL_SIR_NOPM_2_20210128T061692_20210128T061640_C001  CCS_OFFL_SIR_N	
and Backscatter Quality COGA Altimeter Range and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality COGA Altimeter Range and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality Altimeter Range SSHA, SWH and Backscatter Quality Altimeter Range SSHA, SWH and Backscatter Quality Altimeter Range SSHA, SWH and Backscatter Quality Altimeter Range and Backscatter Quality Backscatter Quality Altimeter Range SSHA, SWH and Backscatter Quality Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T043126_20210128T043650_C001  CS_OFFL_SIR_NOPM_2_20210128T043709_20210128T043650_C001  CS_OFFL_SIR_NOPM_2_20210128T043709_20210128T0405025_C001  CS_OFFL_SIR_NOPM_2_20210128T04757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T04757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050132_0010128T050649_C001  CS_OFFL_SIR_NOPM_2_20210128T0505326_00210128T060649_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T060649_C001  CS_OFFL_SIR_NOPM_2_20210128T061052_20210128T061649_C001  CS_OFFL_SIR_NOPM_2_20210128T061602_20210128T061649_C001  CS_OFFL_SIR_NOPM_2_20210128T061602_20210128T061640_C001  CS_OFFL_SIR_NOPM_2_20210128	
and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality ocosen Altimeter Range and Backscatter Quality Flags have be after one or more records.  CS_OFFL_SIR_NOPM_2_20210128T042324_20210128T043002_C001  CS_OFFL_SIR_NOPM_2_20210128T043126_20210128T043650_C001  CS_OFFL_SIR_NOPM_2_20210128T043126_20210128T043650_C001  CS_OFFL_SIR_NOPM_2_20210128T043126_20210128T043928_C001  CS_OFFL_SIR_NOPM_2_20210128T043709_20210128T043928_C001  CS_OFFL_SIR_NOPM_2_20210128T04757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T04757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T04757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T05132_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061647_20210128T061746_C001  CS_OFFL_SIR_NOPM_2	
and Backscatter Quality of COG Altimeter Range and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality of COG Altimeter Range and Backscatter Qu	
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20210128T043709_20210128T043928_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T05123_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T056492_C001  CS_OFFL_SIR_NOPM_2_20210128T055326_20210128T060849_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061629_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061629_20210128T065332_C001  CS_OFFL_SIR_NOPM_2_20210128T061629_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061629_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061629_20210128T065333_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065732_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065733_C001  CS_OFFL_SIR_NOPM_2_20210128T064	
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T044757_20210128T050025_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T055123_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T055123_C001  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T060849_C001  CS_OFFL_SIR_NOPM_2_20210128T061640_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T0616609_20210128T061640_C001  CS_OFFL_SIR_NOPM_2_20210128T061669_20210128T061640_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T0646439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T0646439_20210128T065333_C001  CS_OFFL_SIR_NOPM_2_20210128T0646439_20210128T065333_C001  CCG_Altimeter Range and Backscatter Quality Set for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T0646439_20210128T063712_C001  CCG_Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.  CCG_OFFL_SIR_NOPM_2_20210128T0646439_20210128T065333_C001  CCG_Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCG_OFFL_SIR_NOPM_2_2	set
and Backscatter Quality, COCG Altimeter Range and Backscatter Quality Flags have be set for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T051825_CO01  CS_OFFL_SIR_NOPM_2_20210128T050131_20210128T05123_CO01  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T055123_CO01  CS_OFFL_SIR_NOPM_2_20210128T054128_20210128T061629_CO01  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_CO01  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061620_CO01  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_CO01  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_CO01  CS_OFFL_SIR_NOPM_2_20210128T06162439_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  COOM Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  COOM Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_CO01  COOM Altimeter Range Altimeter Range Range Altimeter Rang	set
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have b	
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T06169_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T06333_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T06533	
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Set for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061054_20210128T061549_C001  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T0637312_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T06333_C001  Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063333_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  Altimeter Range SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  CCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  CCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001	
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_C001  Backscatter Quality  CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061620_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063732_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063333_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  CCGA Altimeter Range Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T061609_20210128T061746_C001  Backscatter Quality  For one or more records.  CS_OFFL_SIR_NOPM_2_20210128T061627_20210128T061746_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T065333_C001  CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001  Backscatter Quality  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records.  The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records.  The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records.	set
Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag shave be altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flag and Backscatter Quality Flag shave be altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality Flag shave be altimeter Range, SSHA, SWH and Backscatter Quality Flag shave be altimeter Range and Backscatter Quality Flag and Backscatter Quali	set
CS_OFFL_SIR_NOPM_2_20210128T062439_20210128T063712_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Set for one or more records.  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality Flags ha	set
CS_OFFL_SIR_NOPM_2_20210128T064153_20210128T065333_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have be	
CS_OFFL_SIR_NOPM_2_20210128T072310_20210128T072431_C001  OCOG Altimeter Range Quality, OCOG Backscatter Quality  The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.	set
CS_OFFL_SIR_NOPM_2_20210128T073247_20210128T074752_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be altimeter Range and Backscatter Quality Flags have be set for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T075507_20210128T075520_C001  OCOG Altimeter Range Quality, OCOG Backscatter Quality  The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.	set
CS_OFFL_SIR_NOPM_2_20210128T080115_20210128T082422_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T082424_20210128T082826_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T104001_20210128T110656_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T110840_20210128T111333_C001  OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been for one or more records.	set
CS_OFFL_SIR_NOPM_2_20210128T111340_20210128T111709_C001  OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been for one or more records.	set
CS_OFFL_SIR_NOPM_2_20210128T112111_20210128T115514_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	
CS_OFFL_SIR_NOPM_2_20210128T120802_20210128T120933_C001  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	

CS_OFFL_SIR_NOPM_2_20210128T124347_20210128T124637_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_20210128T124838_20210128T125404_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_20210128T125958_20210128T132220_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_20210128T132455_20210128T133350_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_20210128T134656_20210128T134930_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_20210128T140609_20210128T142555_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_20210128T142802_20210128T143303_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_20210128T143907_20210128T151204_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_20210128T153748_20210128T160041_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_20210128T161851_20210128T163425_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_20210128T163427_20210128T163443_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_20210128T164113_20210128T164939_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_20210128T165436_20210128T165443_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_20210128T170417_20210128T170703_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_20210128T170849_20210128T172514_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_20210128T172728_20210128T174203_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_20210128T174911_20210128T175121_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_20210128T175209_20210128T175623_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_20210128T175807_20210128T181034_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_20210128T181048_20210128T181336_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_20210128T181537_20210128T182459_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_20210128T183127_20210128T183128_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_20210128T185317_20210128T190252_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_20210128T190938_20210128T192411_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_20210128T192706_20210128T193526_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_20210128T193742_20210128T195430_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_20210128T195656_20210128T195908_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210128T203627_20210128T203947_C001	Altimeter Range and Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	set for one or more records.  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_20210128T203950_20210128T210334_C001	Altimeter Range and Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	set for one or more records.  The Ocean Altimeter Range, SSHA, SWH and 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_20210128T210846_20210128T211350_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_20210128T211641_20210128T214212_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_20210128T221405_20210128T224124_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_20210128T224811_20210128T225412_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_20210128T225543_20210128T232430_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_20210128T233206_20210128T233403_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_20210128T234714_20210129T002103_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_NOPN_2_20210128T002529_20210128T002614_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_NOPN_2_20210128T003558_20210128T003726_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_NOPN_2_20210128T024435_20210128T024445_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_NOPN_2_20210128T061620_20210128T061627_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_NOPN_2_20210128T085710_20210128T085848_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_NOPN_2_20210128T115514_20210128T115631_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_NOPN_2_20210128T170703_20210128T170817_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_NOPN_2_20210128T214213_20210128T214312_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_NOPN_2_20210128T225412_20210128T225543_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_NOPN_2_20210128T234350_20210128T234714_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_NOPR_2_20210128T001506_20210128T001609_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_NOPR_2_20210128T002614_20210128T003402_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_NOPR_2_20210128T003515_20210128T003528_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_NOPR_2_20210128T022600_20210128T022819_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_NOPR_2_20210128T053723_20210128T053732_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_NOPR_2_20210128T161835_20210128T161851_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

### L2 Quality Flags (20Hz PLRM)

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20210128T000259_20210128T000454_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_20210128T002037_20210128T002200_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_20210128T002529_20210128T002614_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_20210128T003402_20210128T003515_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_20210128T020537_20210128T020546_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_20210128T025153_20210128T025609_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_20210128T030209_20210128T030323_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_20210128T034124_20210128T034328_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_20210128T043928_20210128T044114_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_20210128T051825_20210128T052244_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_20210128T053019_20210128T053051_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_20210128T053806_20210128T054007_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_20210128T061620_20210128T061627_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_20210128T062237_20210128T062405_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_20210128T063712_20210128T064153_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_20210128T065450_20210128T065543_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_20210128T065828_20210128T070355_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_20210128T083826_20210128T084217_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_20210128T085710_20210128T085848_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_20210128T085946_20210128T090202_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_20210128T110716_20210128T110840_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_20210128T111709_20210128T111852_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_20210128T115712_20210128T115830_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_20210128T122915_20210128T123001_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_20210128T125404_20210128T125718_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_20210128T134930_20210128T135131_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_20210128T135437_20210128T135536_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_20210128T140317_20210128T140609_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_20210128T142648_20210128T142802_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_20210128T160739_20210128T161015_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_20210128T161208_20210128T161835_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_20210128T170703_20210128T170817_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_20210128T183532_20210128T183545_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_20210128T190429_20210128T190938_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_20210128T192511_20210128T192706_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_20210128T200210_20210128T200524_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_20210128T200636_20210128T200727_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_20210128T202126_20210128T202632_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_20210128T215621_20210128T215641_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_20210128T225412_20210128T225543_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_20210128T001506_20210128T001609_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_20210128T002614_20210128T003402_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_20210128T011156_20210128T011435_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_20210128T020605_20210128T021643_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_20210128T030323_20210128T030411_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_20210128T034547_20210128T035243_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_20210128T035440_20210128T035640_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_20210128T035718_20210128T035837_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_20210128T044114_20210128T044757_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_20210128T052456_20210128T053019_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_20210128T053558_20210128T053611_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_20210128T053723_20210128T053732_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_20210128T062019_20210128T062237_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_20210128T065333_20210128T065429_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_20210128T065742_20210128T065828_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_20210128T070355_20210128T071054_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_20210128T071521_20210128T071607_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_20210128T072432_20210128T072922_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_20210128T072924_20210128T073247_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_20210128T082826_20210128T083044_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_20210128T084217_20210128T084723_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_20210128T084802_20210128T085002_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_20210128T111852_20210128T112111_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_20210128T121521_20210128T121707_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_20210128T135536_20210128T135729_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_20210128T151204_20210128T151327_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_20210128T165243_20210128T165247_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_20210128T172514_20210128T172728_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_20210128T174429_20210128T174514_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_20210128T183545_20210128T183635_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_20210128T184450_20210128T184639_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_20210128T184845_20210128T184930_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_20210128T202649_20210128T202929_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_20210128T203512_20210128T203627_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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\_NOPR\_2\_20210128T211628\_20210128T211641\_C001 Altimeter Range and Backscatter Quality set for one or more records. PLRM Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality PLRM, OCOG CS OFFL SIR NOPR 2 20210128T215234 20210128T215434 C001 and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality set for one or more records. PLRM Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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 NOPR 2 20210128T215641 20210128T220147 C001 Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPR 2 20210128T233036 20210128T233206 C001 and the OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality set for one or more records. PLRM 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 and Backscatter Quality PLRM, OCOG CS\_OFFL\_SIR\_NOPR\_2\_20210128T233403\_20210128T234350\_C001 Altimeter Range and Backscatter Quality set for one or more records. PLRM

#### 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: 180

#### 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.

52

Number of products with errors:

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

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

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

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	169	169	2	167	0
SIR_NOPR1B	128	128	0	128	0
SIR_NOPN1B	89	89	2	87	0
SIR_NOPM_2	169	169	118	50	1
SIR_NOPR_2	128	128	55	69	4
SIR_NOPN_2	89	89	29	60	0

### 7.1 QCC Errors

Number of QCC reports with errors:

11

Total number of occurrences of each error

SIR_NOPM_2         1         1         0         0         0         0           SIR_NOPR_2         0         0         4         4         4         4	Product Type	EOVSNCDF	MPHSVSNCDF	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-
SIR NOPR 2 0 0 4 4 4 4 4	SIR_NOPM_2	1	1	0	0	0	0					
	SIR_NOPR_2	0	0	4	4	4	4					

Test Description Key:	Test Description Key:						
Abbreviation	Test name	Details					
EOVSNCDF	EnumOrbitVectorSourceNetCDF	Orbit vector source should match one of the allowed enumeration values - NetCDF					
MPHSVSNCDF	MPH_State_Vector_Source_NetCDF	State_Vector_Source mismatch					
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7 - NetCDF					
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7					
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7 - NetCDF					
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7					

#### 7.2 QCC Warnings

Number of QCC reports with warnings

1635

Total number of occurrences of each warning

Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_NOPM1B	167	0	0	0	0	0	0
SIR_NOPM_2	0	0	40	41	0	45	0
SIR_NOPN1B	87	0	0	0	0	0	0
SIR_NOPN_2	0	0	9	29	7	24	27
SIR_NOPR1B	124	0	0	0	0	0	0
SIR_NOPR_2	0	4	18	37	0	28	20

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCE	RPEPOPFDPLRMSINNCDI	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	40	0	36	0	0	0	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	18	2	0	0	23	0	28
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	11	0	0	39	0	45	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	30	0	0	2	25	0	5
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	24	13	36	47	30
SIR_NOPR1B	0	0	0	0	0	0	0
SIR NOPR 2	0	39	0	1	48	33	4

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_NOPM1B	0	0	0	0	0	0	
SIR_NOPM_2	35	0	1	0	0	0	
SIR_NOPN1B	0	0	0	0	43	0	
SIR_NOPN_2	26	24	12	0	0	0	
SIR_NOPR1B	0	0	0	0	128	6	
SIR NOPR 2	25	38	0	11	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				
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)				
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only				
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample				
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter				
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter				

# 7.3 Missing QCC Reports

Number of products with missing QCC reports: