

# **QA4EO Daily Report for NOP data:**

## 31/07/2020

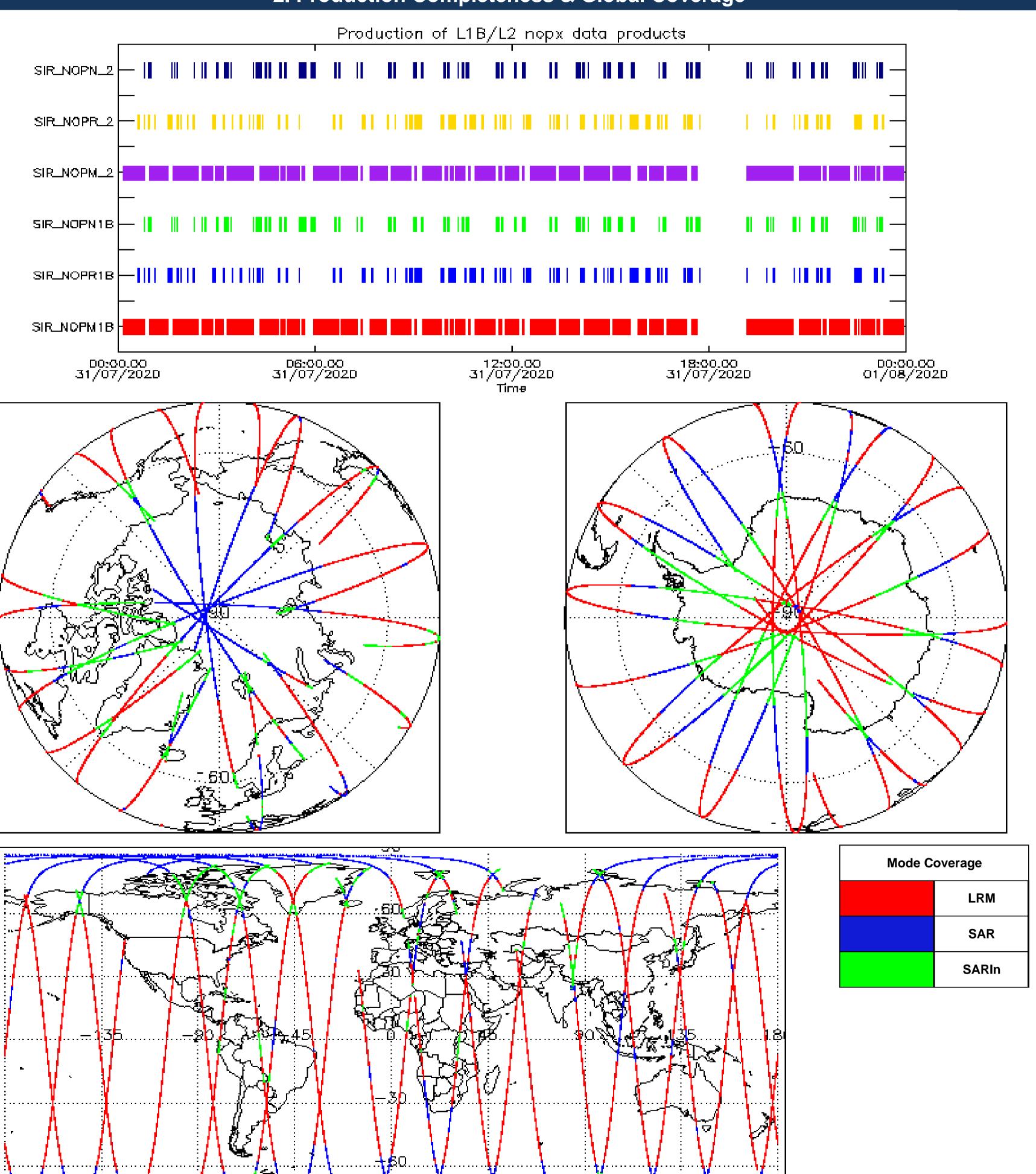
# 1. Overview

Report Production:	03-Aug-2020	
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 and 5.5
Measurement Quality Flag Check	See Section 5.6
Ocean Retracking Quality Check	See Section 5.7
QCC Error/ Warning Check	See Section 6.1 and 6.2

Mission / Instru	Mission / Instrument News	
30-Jul-2020	CRYO2ICE unavailability: 30/07/2020 22:23:16 to 31/07/2020 00:10:26	
31-Jul-2020	CRYO2ICE unavailability: 30/07/2020 22:23:16 to 31/07/2020 00:10:26	
01-Aug-2020	Nothing planned	

# 2. Production Completeness & 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**

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:

#### 4.2 L1B Product Header Analysis

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

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

Number of products with errors:

#### 4.3 L1B Auxilary Data File Usage Check

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

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

Number of products with errors:

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

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

**Number of products with errors:** 

0

0

0

#### 4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

4

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20200731T042140_20200731T042450_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20200731T141144_20200731T141635_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20200731T150442_20200731T151510_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20200731T191129_20200731T191545_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

## 4.6 L1B Waveform Group Data Check

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

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

Number of products with errors: 11

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20200731T001028_20200731T003627_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20200731T152129_20200731T153627_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20200731T164237_20200731T171513_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T031324_20200731T031907_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T090457_20200731T090553_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T091527_20200731T091642_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T103854_20200731T104005_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T122117_20200731T122221_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T153740_20200731T154035_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200731T222525_20200731T222552_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20200731T190853_20200731T191013_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.

## 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:

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## **5.4 L2 Auxiliary Correction Error Check**

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

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

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

Number of products with errors:

42

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20200731T085136_20200731T085215_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_NOPM_2_20200731T143256_20200731T144746_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_20200731T150442_20200731T151510_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_20200731T205902_20200731T210704_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20200731T023257_20200731T023417_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_20200731T031324_20200731T031907_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_20200731T040732_20200731T040821_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_20200731T041230_20200731T041439_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_20200731T041546_20200731T041816_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_20200731T045514_20200731T045653_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_20200731T050540_20200731T050749_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_20200731T055143_20200731T055629_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_20200731T064333_20200731T064556_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_20200731T081428_20200731T081821_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_20200731T090457_20200731T090553_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FFS) Non-Equilibrium Long Period	Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20200731T095415_20200731T095728_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_20200731T113148_20200731T113606_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_20200731T114146_20200731T114309_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_20200731T122117_20200731T122221_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_20200731T131928_20200731T132114_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_20200731T140326_20200731T140419_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_20200731T145730_20200731T145951_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_20200731T154122_20200731T154320_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_20200731T154323_20200731T154334_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_20200731T162739_20200731T162946_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_20200731T163630_20200731T164101_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_20200731T171806_20200731T172130_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_20200731T172714_20200731T172747_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_20200731T195648_20200731T195824_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_20200731T212655_20200731T212811_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_20200731T213345_20200731T213704_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_20200731T230614_20200731T230733_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_20200731T231242_20200731T231554_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	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_NOPR_2_20200731T072641_20200731T073213_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_20200731T085503_20200731T085641_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_20200731T090553_20200731T091343_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_20200731T104410_20200731T105318_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_20200731T122523_20200731T123316_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_20200731T140419_20200731T140959_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_20200731T154334_20200731T155033_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_20200731T172158_20200731T172714_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_20200731T205444_20200731T205642_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20200731T042140_20200731T042450_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_NOPM_2_20200731T141144_20200731T141635_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_NOPM_2_20200731T150442_20200731T151510_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_NOPM_2_20200731T191129_20200731T191545_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

## **5.6 L2 Measurement Quality Flag Check**

## L2 Quality Flags (20Hz)

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

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

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

4

Number of products with errors: 83

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20200731T001028_20200731T003627_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_20200731T003807_20200731T004648_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_20200731T005823_20200731T005845_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_20200731T005929_20200731T010626_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_20200731T010643_20200731T013048_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_20200731T014454_20200731T014701_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

Description (1996)   Selection   Selecti			
G. GHT. SIR MONE 2 SERVICE COST ACCOUNT COSTS CANDON TO SIRE COSTS	CS_OFFL_SIR_NOPM_2_20200731T014948_20200731T015424_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
### COLONIA DE HOME A 2000/01/1909 ACCIDITO MODE COLO DE LOS ASIA MARCO DE LOS ASIA	CS_OFFL_SIR_NOPM_2_20200731T015517_20200731T020531_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
20_0P_BR_NOP4_2_200071730048_200071730048_C01   20_0P_BR_NOP4_2_200071730048	CS_OFFL_SIR_NOPM_2_20200731T020545_20200731T020642_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Continue of the Continue of	CS_OFFL_SIR_NOPM_2_20200731T020759_20200731T021631_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
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28. DFFL SRI NOPW 2 70007751700195. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000731702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000741702419. 2000071704419. C001  C009 All reset Range. SBIA. SPH. 20000747102419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000747102419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000747102419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000747102419. 20000741702419. C001  C009 All reset Range. SBIA. SPH. 20000747102419. 200007172419. C001  C009 All reset Range. SBIA. SPH. 2000074710241	CS_OFFL_SIR_NOPM_2_20200731T023941_20200731T025339_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Sed-Section Cuelly  Cell, OFTL, SIR, NORMA_280200731T003913_20300731T003914_C001  Cell, OFTL, SIR, NORMA_280200731T003913_20300731T003914_C001  Cell, OFTL, SIR, NORMA_280200731T004916_20300731T004944_C001  Cell, OFTL, SIR, NORMA_280200731T044446_20300731T044446_C001  Cell, OFTL, SIR, NORMA_280200731T044046_20300731T044046_C001  Cell, OFTL, SIR, NORMA_280200731T048046_20300731T048042_C001  Cell, OFTL, SIR, NORMA_280200731T048046_20300731T048046_C001  Cell, OFTL, SIR, NORMA_280200731T048046_20	CS_OFFL_SIR_NOPM_2_20200731T030142_20200731T031224_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the COCID Alternate Paragra and Backscatter Quality Flags have been alternated Reging and Reducestation Quality. COCID Alternate Paragra and Backscatter Quality Flags have been alternated Reging and Reducestation Quality. COCID Alternate Paragra and Backscatter Quality Flags have seen alternated Reging and Reducestation Quality. COCID Alternate Paragra and Backscatter Quality Flags have seen alternated Reging and Backscatter Quality. COCID Alternate Paragra and Backscatter Quality Flags have seen alternated Reging and Backscatter Quality. See Disposition Quality. See Disposition Quality See Disposition Quality. See Disposition Quality See Dis	CS_OFFL_SIR_NOPM_2_20200731T031908_20200731T032134_C001		1
Backstater Coulty  Doesn Attrieter Range SSHA, SWH  Doesn Attrieter Range and Backstater County Flags have been set  The Occan Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags  Doesn Attrieter Range and Backstater County Flags and the COCO Attrieter Range and Backstater County Flags  Doesn Attrieter Range and Backstater County Flags and the COCO Attrieter Range and Backstater County Flags  Doesn Attrieter Range and Backstater County Flags have been  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been set  Doesn Attrieter Range and Backstater County Flags have been  Doesn Attrieter Range and Backstater County Flags have been  Doesn Attrieter Range and Backstater County Flags have been  Doesn Attrieter Range	CS_OFFL_SIR_NOPM_2_20200731T032913_20200731T034311_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
oc. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T04003 _ 20200731T04003 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T050005 _ COID  CS. OFFL. SIR. NOPM. 2. 20200731T05005 _ COID  CS. OFFL. SIR. NOPM. 2. 202007	CS_OFFL_SIR_NOPM_2_20200731T034450_20200731T034546_C001		
Sacksater Quality  CS_OFFL_SIR_NOPM_2_20200731T042941_20200731T042892_CU01  CS_OFFL_SIR_NOPM_2_20200731T043013_2020731T043032_C001  CS_OFFL_SIR_NOPM_2_20200731T043013_2020731T043032_C001  CS_OFFL_SIR_NOPM_2_20200731T043013_2020731T043032_C001  CS_OFFL_SIR_NOPM_2_20200731T043013_2020731T043031_C001  CS_OFFL_SIR_NOPM_2_20200731T043013_2020731T043010_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_2020731T043010_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_2020731T043010_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_2020731T043010_C001  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T04393_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043932_C000731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043932_C000731T04393_C0010  CS_OFFL_SIR_NOPM_2_20200731T043932_C000731T043933_C0010  CS_OFFL_SIR_NOPM_2_20200731T043932_C000731T04491_20200731T044912_C000731T044912_C	CS_OFFL_SIR_NOPM_2_20200731T034549_20200731T035922_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20200731T04201_20200731T043032_C001  CS_OFFL_SIR_NOPM_2_20200731T043013_20200731T043332_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_20200731T045310_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_20200731T045310_C001  CS_OFFL_SIR_NOPM_2_20200731T043713_20200731T045310_C001  CS_OFFL_SIR_NOPM_2_20200731T045713_20200731T045310_C001  CS_OFFL_SIR_NOPM_2_20200731T045713_20200731T045310_C001  CS_OFFL_SIR_NOPM_2_20200731T045713_20200731T060540_C001  CS_OFFL_SIR_NOPM_2_20200731T045533_20200731T060540_C001  CS_OFFL_SIR_NOPM_2_20200731T045533_20200731T060540_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T060540_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T060540_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T063017_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T063017_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T063017_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T0505553_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T065555_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T065555_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T063055_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T063055_20200731T063032_C001  CS_OFFL_SIR_NOPM_2_20200731T063055_20200731T074055_20200731	CS_OFFL_SIR_NOPM_2_20200731T035924_20200731T040007_C001		
and Backscatter Quality, QCOG Altimeter Range, and Backscatter Quality Flags have been Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T05895_20200731T063917_C001  CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T064905_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T064905_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T064905_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T07428_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T07405_20200731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_1000174108405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_1000174108405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000174108405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_10000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C000731T08405_C001  CS_OFFL_SIR_NOPM_2_20200731T08405_C00	CS_OFFL_SIR_NOPM_2_20200731T042501_20200731T042850_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T04563_20200731T050440_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T050440_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T050917_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T050917_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T050917_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T062322_C001  CS_OFFL_SIR_NOPM_2_20200731T050851_20200731T062332_C001  CS_OFFL_SIR_NOPM_2_20200731T063060_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T064327_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T074082_C001  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T074082_C001  CS_OFFL_SIR_NOPM_2_20200731T074082_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T084482_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T084482_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T08408_C001  CS_OFFL_SIR_NOPM_2_20200731T	CS_OFFL_SIR_NOPM_2_20200731T043013_20200731T043532_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  GS_OFFL_SIR_NOPM_2_20200731T050853_20200731T050017_C001  Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  GS_OFFL_SIR_NOPM_2_20200731T063905_20200731T0649333_C001  GS_OFFL_SIR_NOPM_2_20200731T064927_20200731T071208_C001  GS_OFFL_SIR_NOPM_2_20200731T064927_20200731T071208_C001  GS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074266_C001  GS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074266_C001  GS_OFFL_SIR_NOPM_2_20200731T074052_20200731T081048_C001  GS_OFFL_SIR_NOPM_2_20200731T074451_20200731T082412_C001  GS_OFFL_SIR_NOPM_2_20200731T074451_20200731T082412_C001  GS_OFFL_SIR_NOPM_2_20200731T081821_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084051_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084051_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084051_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084051_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084051_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_20200731T084701_20200731T084056_C001  GS_OFFL_SIR_NOPM_2_2	CS_OFFL_SIR_NOPM_2_20200731T043713_20200731T045310_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality. OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T055851_20200731T063332_C001  CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T07408_C001  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T07408_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T07408_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T084085_C001  CS_OFFL_SIR_NOPM_2_20200731T084071_20200731T084085_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T084085_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085013_C	CS_OFFL_SIR_NOPM_2_20200731T045653_20200731T050540_C001	_	
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T06493_2_C0200731T06433_C001  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T071208_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081045_C001  CS_OFFL_SIR_NOPM_2_20200731T081081033_C001  CS_OFFL_SIR_NOPM_2_20200731T08108103_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  COean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  COean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Bac	CS_OFFL_SIR_NOPM_2_20200731T050853_20200731T053017_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T071208_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CCCan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CCCAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCCAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20200731T055851_20200731T063232_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  And the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T085133_C001  Altimeter Range and Backscatter Quality  CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001  COEAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCEAN Altimeter Range and Backscatter Quality Flags have been set for one or more records.  COEAN Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCEAN Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCEAN Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCEAN Altimeter Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_NOPM_2_20200731T063905_20200731T064333_C001		
CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T08513	CS_OFFL_SIR_NOPM_2_20200731T064827_20200731T071208_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20200731T081048_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001  Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001	CS_OFFL_SIR_NOPM_2_20200731T074052_20200731T074326_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001  Backscatter Quality  CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001  Backscatter Quality  Coean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been 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_20200731T091642_20200731T095011_C001  Backscatter Quality  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG A	CS_OFFL_SIR_NOPM_2_20200731T074451_20200731T081048_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Set for one or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Set for one or more records.  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been 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 and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_NOPM_2_20200731T081821_20200731T082412_C001		
CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags  and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags  and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags  and the OCOG Altimeter Range and Backscatter Quality Flags	CS_OFFL_SIR_NOPM_2_20200731T082700_20200731T084055_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_NOPM_2_20200731T084711_20200731T085133_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Altimeter Range and Backscatter Quality set for one or more records.	CS_OFFL_SIR_NOPM_2_20200731T091642_20200731T095011_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_NOPM_2_20200731T095728_20200731T100244_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_20200731T104006_20200731T104410_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_20200731T105319_20200731T110531_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_20200731T110817_20200731T112929_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_20200731T113606_20200731T113730_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_20200731T113737_20200731T114146_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20200731T114648_20200731T115653_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_20200731T115841_20200731T120558_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_20200731T120645_20200731T121115_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_20200731T121929_20200731T121936_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_20200731T123316_20200731T130834_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_20200731T131649_20200731T131927_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_20200731T132732_20200731T134002_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_20200731T134015_20200731T135745_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_20200731T135901_20200731T140326_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_20200731T141144_20200731T141635_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_20200731T141901_20200731T143052_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20200731T143256_20200731T144746_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_20200731T145028_20200731T145528_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_20200731T150442_20200731T151510_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_20200731T152129_20200731T153627_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_20200731T161254_20200731T162626_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_20200731T162946_20200731T163441_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_20200731T164237_20200731T171513_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_20200731T191013_20200731T191022_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_20200731T191840_20200731T191900_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_20200731T191944_20200731T194515_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_20200731T194812_20200731T195312_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_20200731T200108_20200731T203440_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_20200731T204647_20200731T205330_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_20200731T205902_20200731T210704_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_20200731T212000_20200731T212419_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_20200731T212811_20200731T213345_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_20200731T214105_20200731T221637_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_20200731T224614_20200731T230220_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_20200731T230733_20200731T231242_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_20200731T231934_20200731T235516_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_20200731T054120_20200731T054138_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_20200731T091527_20200731T091642_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_20200731T141802_20200731T141901_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_20200731T173651_20200731T173806_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_20200731T191545_20200731T191651_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_20200731T194642_20200731T194812_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_20200731T211209_20200731T211213_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_20200731T005457_20200731T005534_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_20200731T045310_20200731T045514_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_20200731T081048_20200731T081427_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_20200731T084646_20200731T084710_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200731T171513_20200731T171705_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_20200731T212419_20200731T212655_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_20200731T213704_20200731T214105_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:

**75** 

Product  Product	Test Failed	Description
Product	Ocean Altimeter Range, SSHA, SWH	Description COLLA CALLA
CS_OFFL_SIR_NOPN_2_20200731T004800_20200731T004815_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20200731T014701_20200731T014843_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_20200731T021809_20200731T021959_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_20200731T023826_20200731T023941_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_20200731T032627_20200731T032647_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_20200731T040732_20200731T040821_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_20200731T041546_20200731T041816_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_20200731T042018_20200731T042140_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_20200731T042850_20200731T043012_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_20200731T045514_20200731T045653_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_20200731T053218_20200731T053525_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_20200731T053621_20200731T053752_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_20200731T055143_20200731T055629_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_20200731T055729_20200731T055851_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_20200731T090012_20200731T090134_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_20200731T091343_20200731T091441_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_20200731T100244_20200731T100354_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_20200731T102121_20200731T102143_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_20200731T113148_20200731T113606_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_20200731T114146_20200731T114309_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_20200731T120559_20200731T120645_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_20200731T122117_20200731T122221_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_20200731T122225_20200731T122322_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_20200731T130940_20200731T131106_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_20200731T141802_20200731T141901_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_20200731T144846_20200731T145028_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_20200731T145730_20200731T145951_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_20200731T151934_20200731T152129_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_20200731T153740_20200731T154035_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_20200731T163630_20200731T164101_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_20200731T171806_20200731T172130_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_20200731T173900_20200731T174220_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_20200731T191023_20200731T191129_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_20200731T194642_20200731T194812_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_20200731T195648_20200731T195824_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_20200731T210705_20200731T211039_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_20200731T223242_20200731T223312_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_20200731T224431_20200731T224603_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_20200731T230614_20200731T230733_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_20200731T013049_20200731T013749_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_20200731T014843_20200731T014948_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_20200731T025339_20200731T025736_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_20200731T040631_20200731T040731_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_20200731T041816_20200731T041904_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_20200731T042450_20200731T042501_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_20200731T053142_20200731T053217_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_20200731T063233_20200731T063450_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_NOPR_2_20200731T081048_20200731T081427_C001	and Backscatter Quality PLRM OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200731T081048_20200731T081427_C001  CS_OFFL_SIR_NOPR_2_20200731T084646_20200731T084710_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM  OCOG Altimeter Range Quality PLRM,	and the OCOG Altimeter Range and Backscatter Quality Flags have been

		1
CS_OFFL_SIR_NOPR_2_20200731T090134_20200731T090204_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_20200731T091441_20200731T091527_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_20200731T095011_20200731T095415_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_20200731T100354_20200731T100634_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_20200731T101226_20200731T101734_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_20200731T112929_20200731T113148_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_20200731T114309_20200731T114648_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_20200731T122523_20200731T123316_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_20200731T132114_20200731T132732_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_20200731T143052_20200731T143256_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_20200731T145951_20200731T150442_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_20200731T160407_20200731T161254_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_20200731T164101_20200731T164237_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_20200731T171513_20200731T171705_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_20200731T172747_20200731T172904_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_20200731T174245_20200731T174252_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_20200731T194515_20200731T194642_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_20200731T205444_20200731T205642_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_20200731T211645_20200731T212000_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_20200731T212419_20200731T212655_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_20200731T213704_20200731T214105_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_20200731T222925_20200731T223227_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_20200731T223440_20200731T223725_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_20200731T230220_20200731T230614_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_20200731T231554_20200731T231934_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

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

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

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

Number of products with errors:

167

## 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.

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:

125

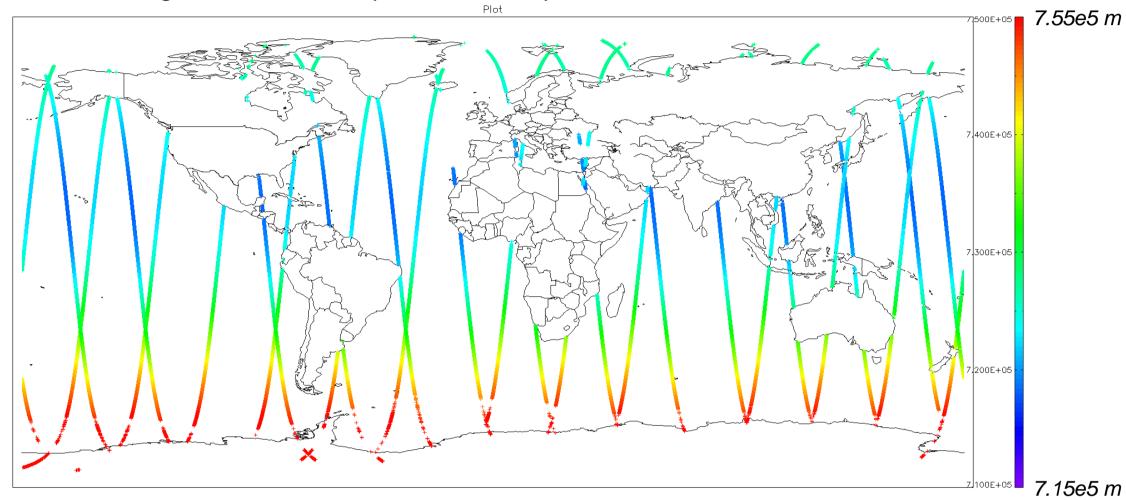
64

#### **5.8 L2 Parameters Check**

The following section provides plots and statistics of some key science parameters extracted from the L2 products.

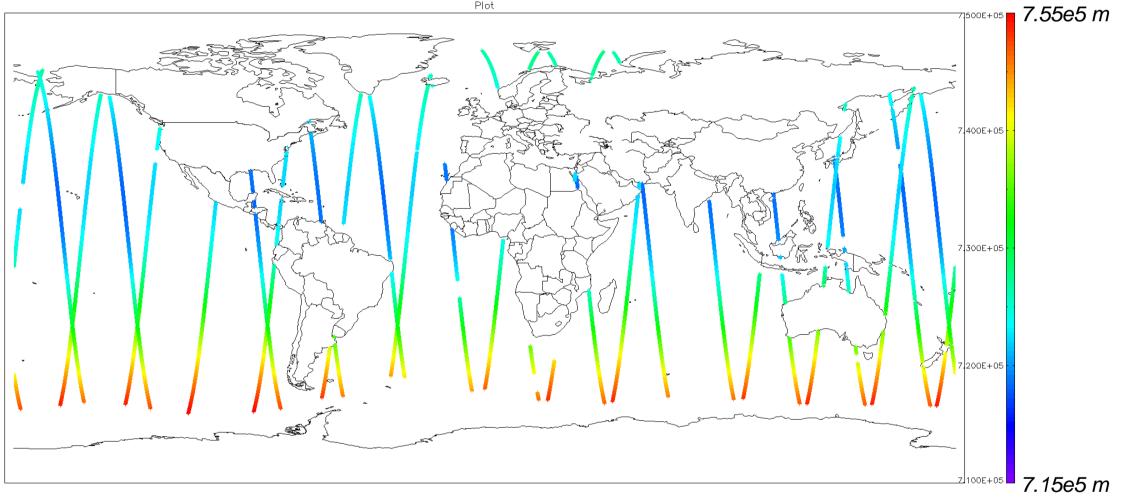
#### Range to Ocean Surface (Ocean and OCOG retrackers)

#### L2 NOP - Range to Ocean Surface (Ocean Retracker)

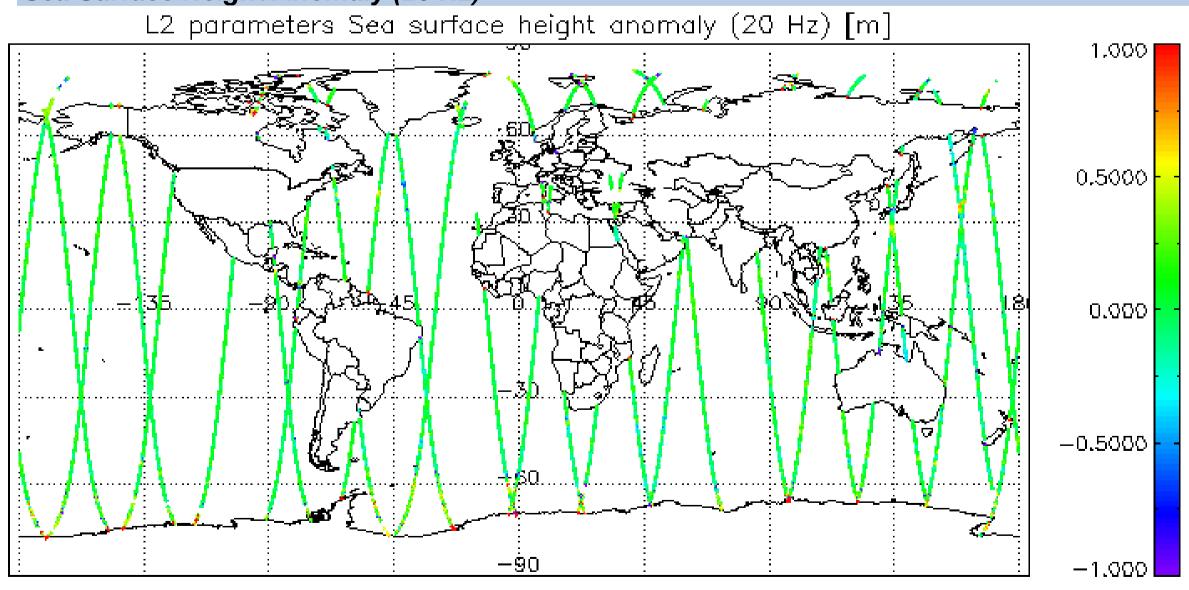


Parameter		NOPM	NOPN	NOPR
Range Ocean (1	mean	729.41 km	739.04 km	734.20 km
Hz)	st dev	9.08 km	13.33 km	11.70 km
Range OCOG (1	mean	729.37 km	N/A	N/A
Hz)	st dev	9.07 km	N/A	N/A

#### L2 NOP - Range to Ocean Surface (OCOG Retracker)

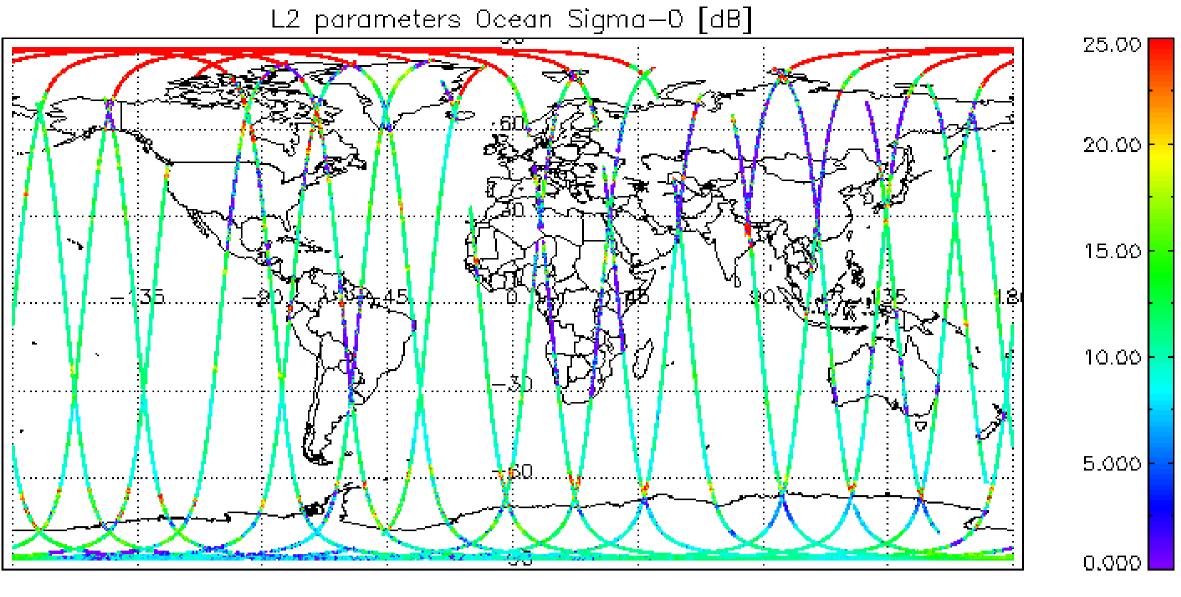




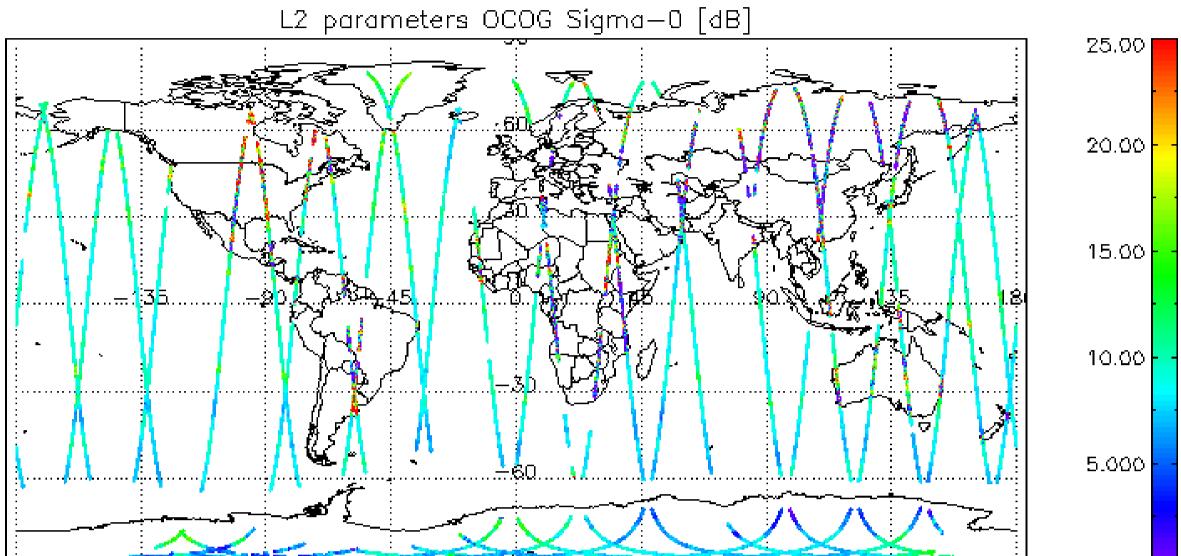


Parameter	NOPM	NOPN	NOPR		
SSHA (1 Hz)	mean +/- std	mean +/- std	mean +/- std		
33ПА (1 П2 <i>)</i>	0.0 +/- 0.1	0.9 +/- 4.2	0.0 +/- 0.4		
66HV (30 H=)	mean +/- std	mean +/- std	mean +/- std		
SSHA (20 Hz)	0.0 +/- 0.2	1.2 +/- 5.5	-0.0 +/- 0.9		

# Sigma-0 (Ocean and OCOG retrackers)



Parameter	NOPM	NOPN	NOPR
Ocean Sigma-0	mean +/- std	mean +/- std	mean +/- std
(1 Hz)	11.1 +/- 1.9	11.7 +/- 4.5	12.3 +/- 3.8
Ocean Sigma-0	mean +/- std	mean +/- std	mean +/- std
(20 Hz)	10.6 +/- 3.3	9.7 +/- 12.4	17.5 +/- 10.8
OCOG Sigma-0	mean +/- std	17.5 +/- 10.8	mean +/- std
(1 Hz)	9.3 +/- 2.1	N/A	N/A
OCOG Sigma-0	mean +/- std	0.704	mean +/- std
(20 Hz)	10.0 +/- 5.8	N/A	N/A



# **6. 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	134	134	1	133	0
SIR_NOPR1B	94	94	0	94	0
SIR_NOPN1B	101	101	1	100	0
SIR_NOPM_2	134	134	74	53	7
SIR_NOPR_2	94	94	30	59	5
SIR NOPN 2	101	101	42	57	2

## **6.1 QCC Errors**

**Number of QCC reports with errors:** 

23

Total number of occurrences of each error

<b>Product Type</b>	EOVSNCDF	MPHSVSNCDF	RLOBOPNCDF	RL	RL	RLOBOPNCDF	RL	RL	•	-	-
SIR_NOPM_2	7	7	0	0	0	0	0	0			
SIR_NOPN_2	2	2	0	0	0	0	0	0			
SIR_NOPR_2	1	1	4	1	4	4	1	4			

<b>Test Description Key:</b>	est 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_6	Latitude should be between -90E6 and 90E6				
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7				
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7 - NetCDF				
RL	RangeLongitude_6	Longitude should be between -180E6 and 180E6				
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7				

## **6.2 QCC Warnings**

**Number of QCC reports with warnings** 

1599

Total number of occurrences of each warning

	Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
	SIR_NOPM1B	133	0	0	0	0	0	0
	SIR_NOPM_2	0	0	42	41	2	37	0
	SIR_NOPN1B	99	0	0	0	0	0	0
	SIR_NOPN_2	0	0	10	28	4	21	23
	SIR_NOPR1B	92	0	0	0	0	0	0
	SIR_NOPR_2	0	4	32	37	0	30	24

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMS	INNCD RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	33	3	35	0	0	0	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	16	1	0	0	19	0	27
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	15	3	0	41	0	47	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	34	0	0	4	31	0	2

SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	23	20	41	49	28
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	0	42	0	1	51	38	4

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
SIR_NOPM1B	3 0	0	0	1	0	0	0
SIR_NOPM_2	2 37	0	3	1	0	0	0
SIR_NOPN1B	0	0	0	0	0	39	0
SIR_NOPN_2	28	24	13	0	1	0	0
SIR_NOPR1B	0	0	0	0	0	94	5
SIR NOPR 2	38	42	2	0	4	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					
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDSINNCDF	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					
	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)					
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: