

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

<u>08/10/2022</u>

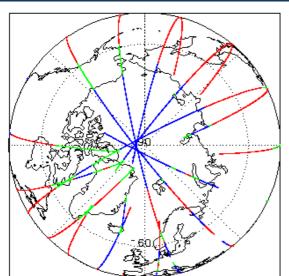
# IDEAS-QA4E®

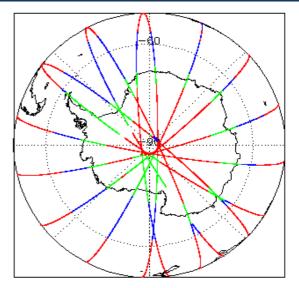
an aut Draduation.	10 Oct 0000	Check	L1 & L2
Report Production:	10-Oct-2022	Server check: science-pds.cryosat.esa.int	Nominal
Dueseese Ulaadi	CrueSet Occar Presseer	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal
Data Used:	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal
Data Oseu:	L1B & L2 Science Data	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 7.2

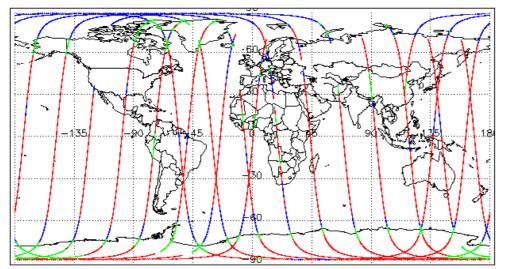
1. Overview

Mission / Instrument News		
07-Oct-2022	Unplanned SIRAL unavailability from 07/10/2022 15:32:31 to 08/10/2022 07:16:55	
08-Oct-2022	Unplanned SIRAL unavailability from 07/10/2022 15:32:31 to 08/10/2022 07:16:55	
09-Oct-2022	Nothing planned	

# 2. Global Coverage







Mode Coverage		
	LRM	
	SAR	

SARIn

### 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 NetCDF product file (.nc). 0

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 NOPR and NOPN 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: 0				
4.3 L1B Auxilary Data File Usage Check				
Each product is checked for missing Data Set Descriptors with respect to a pre-c	determined baseline and also to check the va	lidity of Auxiliary Data Files is correct.		
> Dynamic Atmospheric Correction: The DAC is missing in all products becau	se the auxiliary files required are not availabl	le in time for processing. This known and expected behaviour.		
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement record.	The bit value of this flag indicates any proble	ems when set.		
Number of products with errors: 0				
4.5 L1B Measurement Confidence Data Check				
CryoSat L1B data includes a measurement confidence flag for each measurement record. The bit value of this flag indicates any problems when set.				
> Attitude Correction Missing: This flag is currently set in error for NOPR products due to a configuration issue. The attitude correction is not actually missing, This is being investigated and will be updated in the next SW update.				
Number of products with errors: 2				
Product	Test Failed	Description		
CS_OFFL_SIR_NOPM1B_20221008T170025_20221008T170315_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records		

There is an error in the scaling of the L1B waveform for one or more

records

# 4.6 L1B Waveform Group Data Check

CS OFFL SIR NOPM1B 20221008T230332 20221008T231555 C001

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

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#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20221008T162551_20221008T164458_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20221008T170025_20221008T170315_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20221008T221050_20221008T222427_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20221008T231938_20221008T233544_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20221008T103532_20221008T103725_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20221008T111118_20221008T111704_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20221008T134947_20221008T135444_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20221008T233545_20221008T233800_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20221008T233936_20221008T234151_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20221008T143045_20221008T143305_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20221008T154234_20221008T154338_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20221008T180858_20221008T181145_C001	Loss of Echo	The tracking echo is missing for one or more records

Power scaling error

### 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 NetCDF product file (.nc). Number of products with errors: 0

#### 5.2 L2 Product Header Analysis

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

Number of products with errors:

#### 5.3 L2 Auxiliary Data File Usage Check

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

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

Number of products with errors:

#### 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).

0

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 Corection, 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.

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20221008T121656_20221008T123041_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_20221008T075512_20221008T075626_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_20221008T080123_20221008T080445_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_20221008T093600_20221008T093758_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_20221008T103114_20221008T103234_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_20221008T111118_20221008T111704_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_20221008T121033_20221008T121137_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_20221008T134947_20221008T135444_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_20221008T152242_20221008T152321_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_20221008T161424_20221008T161631_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20221008T175223_20221008T175540_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_20221008T180102_20221008T180220_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_20221008T193114_20221008T193434_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_20221008T193957_20221008T194121_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_20221008T211816_20221008T211951_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_20221008T220136_20221008T220236_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_20221008T225550_20221008T225757_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_20221008T233936_20221008T234151_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_20221008T105335_20221008T105549_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_NOPR_2_20221008T120404_20221008T120536_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_20221008T152501_20221008T153009_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_20221008T165259_20221008T165410_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_20221008T165413_20221008T165456_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_20221008T165834_20221008T170024_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_20221008T170401_20221008T171208_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_20221008T184245_20221008T185117_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_20221008T202336_20221008T203037_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_20221008T220236_20221008T220820_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_20221008T234151_20221008T234836_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

2

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20221008T170025_20221008T170315_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_20221008T230332_20221008T231555_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 (20 Hz)

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.

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20221008T071655_20221008T072001_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_20221008T073431_20221008T075044_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_20221008T075627_20221008T080123_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_20221008T080823_20221008T084105_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_20221008T084133_20221008T084354_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_20221008T090430_20221008T092902_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_20221008T093836_20221008T094028_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_20221008T094810_20221008T095441_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_20221008T100023_20221008T100450_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_20221008T100932_20221008T101732_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_20221008T101736_20221008T102057_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_20221008T103235_20221008T103532_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_20221008T103726_20221008T105335_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_20221008T105549_20221008T111036_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_20221008T111730_20221008T111942_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_20221008T112713_20221008T114120_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_20221008T114259_20221008T115940_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_20221008T121656_20221008T123041_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_20221008T123742_20221008T125059_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_20221008T125523_20221008T130346_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_20221008T130715_20221008T132849_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_20221008T133411_20221008T133446_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_20221008T133550_20221008T133716_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_20221008T140451_20221008T140811_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_20221008T140813_20221008T143044_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_20221008T143710_20221008T144203_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_20221008T144758_20221008T151049_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_20221008T152321_20221008T152355_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_20221008T154338_20221008T160842_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_20221008T161352_20221008T161423_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_20221008T161632_20221008T162229_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_20221008T162551_20221008T164458_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_20221008T164500_20221008T165234_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_20221008T170025_20221008T170315_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_20221008T171523_20221008T174746_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_20221008T175540_20221008T180101_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_20221008T181146_20221008T181518_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_20221008T183856_20221008T184244_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_20221008T185428_20221008T190344_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_20221008T190630_20221008T192750_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_20221008T193550_20221008T193956_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_20221008T194520_20221008T195501_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_20221008T195649_20221008T200250_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_20221008T203121_20221008T210630_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_20221008T210943_20221008T211443_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_20221008T212543_20221008T215712_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_20221008T221050_20221008T222427_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_20221008T222841_20221008T222954_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_20221008T223001_20221008T224605_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_20221008T224833_20221008T225342_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_20221008T225419_20221008T225549_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_20221008T230332_20221008T231555_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_20221008T231938_20221008T233544_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_20221008T182316_20221008T182500_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

### L2 Quality Flags (20 Hz 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.

51

### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20221008T073120_20221008T073431_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_20221008T094029_20221008T094305_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_20221008T103114_20221008T103234_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_20221008T103532_20221008T103725_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_20221008T111118_20221008T111704_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_20221008T112443_20221008T112618_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_20221008T123250_20221008T123742_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_20221008T125331_20221008T125522_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_20221008T133023_20221008T133411_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_20221008T134947_20221008T135444_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_20221008T143305_20221008T143424_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_20221008T143621_20221008T143710_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_20221008T161232_20221008T161352_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_20221008T162230_20221008T162359_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_20221008T175223_20221008T175540_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_20221008T182316_20221008T182500_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_20221008T183759_20221008T183855_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_20221008T185117_20221008T185427_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_20221008T193957_20221008T194121_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_20221008T200250_20221008T200453_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_20221008T211816_20221008T211951_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_20221008T224653_20221008T224832_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_20221008T225550_20221008T225757_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_20221008T235709_20221008T235911_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_20221008T072403_20221008T072550_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_20221008T075045_20221008T075512_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_20221008T080446_20221008T080823_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_20221008T092902_20221008T093600_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_20221008T120404_20221008T120536_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_20221008T130535_20221008T130715_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_20221008T140230_20221008T140451_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_20221008T152205_20221008T152242_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_20221008T154234_20221008T154338_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_20221008T160842_20221008T161231_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_20221008T165259_20221008T165410_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_20221008T165834_20221008T170024_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_20221008T170401_20221008T171208_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_20221008T174746_20221008T175222_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_20221008T180221_20221008T180624_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_20221008T182939_20221008T183340_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_20221008T183545_20221008T183739_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_20221008T184245_20221008T185117_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_20221008T192751_20221008T193114_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_20221008T194121_20221008T194520_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_20221008T202336_20221008T203037_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_20221008T203046_20221008T203120_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_20221008T211951_20221008T212310_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_20221008T220236_20221008T220820_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_20221008T220834_20221008T220945_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_20221008T225758_20221008T230331_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_20221008T231725_20221008T231938_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records

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

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

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

Number of products with errors:	124

### 5.7 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20 Hz)

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.

0

48

91

Number of products with errors:

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

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

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

Number of products with errors:

### 7. NOP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_NOPM1B	100	100	1	99	0
SIR_NOPR1B	68	68	0	68	0
SIR_NOPN1B	64	64	1	63	0
SIR_NOPM_2	106	106	66	40	0
SIR_NOPR_2	68	68	18	50	0
SIR_NOPN_2	64	64	25	39	0

#### 7.1 QCC Errors

Number of QCC reports with errors:

#### 7.2 QCC Warnings

Number of QCC repor	rts with warnings	1206					
Total number of occurrences of each warning							
Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_NOPM1B	99	0	0	0	0	0	0
SIR_NOPM_2	0	32	30	0	36	0	32
SIR_NOPN1B	63	0	0	0	0	0	0
SIR_NOPN_2	0	8	19	3	17	20	14
SIR_NOPR1B	67	0	0	0	0	0	0
SIR_NOPR_2	0	28	33	1	24	21	12
Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	26	0	0	0	0	23
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	1	0	0	12	0	19	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	3	0	27	0	33	0	0
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	5	26	0	4	30
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	13	12	28	32	16	19

SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	33	0	2	45	33	9	27
Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_NOPM1B	0	0	0	0	0	0	
SIR_NOPM_2	0	2	0	0	0	0	
SIR_NOPN1B	0	0	1	0	29	0	
SIR_NOPN_2	18	11	0	1	0	0	
SIR_NOPR1B	0	0	0	0	68	3	
SIR_NOPR_2	33	2	1	0	0	0	

RBSZOPOEPFDICUP   HangeBackscatterSigmaZeroOPOceanExcludingPolarPDZNetCDF   between -70 and 70 degrees     RBSZOPOEPFDPLRM NCDF   RangeBackscatterSigmaZeroOPOceanExcludingPolarPD2NetCDF   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	Test Description Key:		
MVICEPENCDF   MesingValuentOceanExcludingPolar/B2NetCDF   The value should not be a 'missing' value'' for surface type 0 only for faithuides between 70 and 70 degrees     MVICEPNCDF   MesingValuentOceanExcludingPolar/NetCDF   The value should not be a 'missing' value'' for surface type 0 only for faithuides between 70 and 70 degrees     MVIOREPFENCDF   MesingValuentOceanExcludingPolar/NetCDF   The value should not be a 'missing' value'' for surface type 0 only     RBS2OPCEFFENCLFR   RegeBadxstate/Sigm2zeo/PCeanExcludingPolar/PD2PLMMetCDF   The backstater sigma zero should be between 70 and 7200 (cr missing) for surface type - ocean for faithuides between 70 and 70 degrees     RBS2OPCEFFENCLFR   RegeBadxstaterSigmaZeo/PCeanExcludingPolar/POLMMetCDF   The backstater sigma zero should be between 70 and 7200 (cr missing) for surface type - ocean for faithuides between 70 and 70 degrees     REPEOPEDENMCOF   RegeBadxstaterSigmaZeo/PCeanExcludingPolar/PEDPLMMetCDF   The backstater sigma zero should be between 70 and 70 degrees     REPEOPEDENMCOF   RegePadmissesExcludingPolar/PEDPLMMARCDF   The Polarises should be between 70 and 70 degrees     REPEOPEDENMCOF   RegePadmissesExcludingPolar/PEDPLMMARCDF   The Polarises should be between 70 and 70 degrees     REPEOPEDENMCOF   RegePadmissExcludingPolar/PEDPLMMARCDF   The Padmisses should be between 70 and 15000 (cr missing) for surface type - ocean for faithuides between 70 and 70 degrees     REPEOPEDSAR	Abbreviation	Test name	Details
MVIGUEPNCDF   Missing/alushint/Ceanific/clubinetCDF   The value should not be a 'missing value' for surface type 0 only for latitudes between 70 and 70 degrees     MVIONEDF   Missing/alushint/Ceanific/clubinetCDF   The value should not be a 'missing value' for surface type 0 only     RBSZOPOEPFDRUEPF   RangeBackscatterSigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF   The backscatter sigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF     RBSZOPOEPFDLFIM   RangeBackscatterSigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF   The backscatter sigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF     RESZOPOEPFDLRIMCDF   RangeBackscatterSigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF   The backscatter sigmaZaroOPOceaniExcludingPolar/ED2FLNM+wCDF     RPEPOFFDLRIMCDFR   RangePackinesExcludingPolar/OPED24   The backscatter sigmaZaroOPOceaniExcludingPolar/OPED24     RPEPOFFDLRIMNCDFR   RangePackinesExcludingPolar/OPED24   The backscatter sigmaZaroOPOceaniExcludingPolar/OPED24     RPEPOFFDLRIMNCDFR   RangePackinesExcludingPolar/OPED24   The backscatter sigmaZaroOPOceaniExcludingPolar/OPED24     RPEPOFFDLRIMNCDF   RangePackinesExcludingPolar/OPED24   The backscatter sigmaZaroOPOceaniExcludingPolar/OPED24     RPEPOFFDLRIMNCDF   RangePackinesExcludingPolar/OPED24   The backscatter sigmaZaroOPOceaniExcludingPolar/OPED24     RPEPOFFDLRIMNCDF   RangePackinesExcludingPolar/OPED24   The backscatt	BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
MVIONCDF   Missing/allus/inf/Cean/MetCDF   The value should not be a 'missing value' for surface type 0 only     RBSZOPOEPFDLCDF   RangeBackstate/GigmaZeroOPOceanExcludingPolarED2MENDEF   The backstate sigma zeroOPOceanExcludingPolarED2MENDEF     RBSZOPOEPFDLIAM NCDF   RangeBackstate/GigmaZeroOPOceanExcludingPolarED2MENDEF   The backstate sigma zeroOPOceanExcludingPolarED2MENDEF   The backstate sigmaZeroOPOceanExcludingPolarMetODF   The backstate sigmaZeroOPOceanExcludingPolarMetOPE   The backstate sigmaZeroOPOCE	MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
RBSZOPOEPEDNODP   ParageBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF   The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RBSZOPOEPEDLRM   RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLIMMetCDF   The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RNELPOTONCDF   RangePeakinessExcludingPolar/OPD2LRMAetCDF   The Non-equilibrium tope period ocean loading tide height should be between 40mm and 40mm (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RNEPOPFDLRMSAR   RangePeakinessExcludingPolar/OPD2LRMAEtOF   The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RNEPOPFDELRMSNR   RangePeakinessExcludingPolar/OPED2LRMAENUCDF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RPEPOPFDELRMNODF   RangePeakinessExcludingPolar/OPED2RMAENDEF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.     RPEPOPFDELRMNODF   RangePeakinessExcludingPolar/OPED2RARNetCDF   The Peakiness should be	MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
Instactor/CPFPURM   Bargeassatistication/Control Control Contrel Contro Contrel Control Control Control Contente Control Control	MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
NCDF   RangeBackscatterSigmaZeroOPCceanExcludingPolarN2PL/HMMetCDF   between. 70 and 70 argueses     RBSZOPOEPNCDF   RangeBackscatterSigmaZeroOPCceanExcludingPolarNatCDF   The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between. 700 and 70 argueses     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOFFD22FIAMMetCDF   The Peakiness should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 70 agrees     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOFFD22FIAMMetCDF   The Peakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between 700 and 70 agrees     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOFFD22FIAMSRNetCDF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 agrees     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOFFD22FIAMSINNetCDF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 agrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOFFD22SINNetCDF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 agrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOFFD2SINNetCDF   The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 70 and 70 agrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOFSINNe	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
Instruction   Detween 7:0 and 70 degrees     RNELPOTONCDF   RangeNELPOceanTideOceanNetCDF   The Non-equilibrium tong period ocean localing tide height should be between 40mm and 40mm (or missing) for surface type = ocean     RPEPOPFDLEMNAR   RangePeakinessExcludingPolarOPFD2LRMNetCDF   The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDLEMNAR   RangePeakinessExcludingPolarOPFD2LRMSARNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDLEMNAR   RangePeakinessExcludingPolarOPFD2RLMSINNECDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDENNCDF   RangePeakinessExcludingPolarOPFD2SARNECDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDISINNCDF   RangePeakinessExcludingPolarOPFD2SINNECDF   The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDISINNCDF   RangePeakinessExcludingPolarOPFDSINNECDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees     RPEPOPFDINNCDF   RangePeakinessExcludingPolarOPFRINECDF   The Peakiness should be between 0 and 900000 (or missing) for surface type = ocean for latitudes b		RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
Envelopie   surface type = ocean   surface type = ocean     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOPFD2RMNetCDF   The Peakiness Evolution between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDLRMSAR   RangePeakinessExcludingPolarOPFD2RMNetCDF   The Peakiness Evolution between 0 and 5000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDLRMSAR   RangePeakinessExcludingPolarOPFD2RMSINNetCDF   The Peakiness Evolution between 0 and 5000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDLRMNCDF   RangePeakinessExcludingPolarOPFD2KMNetCDF   The Peakiness Evolution between 0 and 5000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDISINNCDF   RangePeakinessExcludingPolarOPFD2KMNetCDF   The Peakiness Evolution between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDISINNCDF   RangePeakinessExcludingPolarOPFD2KMNetCDF   The Peakiness Evolution between -70 and 70 degrees     RPEPOPSINNCDF   RangePeakinessExcludingPolarOPFD2KMNetCDF   The Peakiness Evolution between -70 and 70 degrees     RPEOPOPSINNCDF   RangePeakinessExcludingPolarOPFSNNetCDF   The Peakiness Evolution between -70 and 70 degrees     RSEAONCDF   RangePeakinessExcludingPolarOPFSNNetCDF   The Peakiness Evolutio between -	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
IntPEPOPFDLENKINCDF   and 70 degrees   and 70 degrees     PEPOPFDELINKSAR   AngePeakinessExcludingPolarOPFD2PLENKSARNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     PEPOPFDELINKSIN   AngePeakinessExcludingPolarOPFD2PLENKSINNetCDF   The Peakiness should be between 0 and 90000 (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     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOPFD2SINNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDRSINNCDF   RangePeakinessExcludingPolarOPFD2SINNetCDF   The Peakiness should be between 0 and 90000 (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     RSBEONCDF   RangePeakinessExcludingPolarOPSINNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSSBAONCDF   RangeSeaSlateBiasCorectionOceanNetCDF   The sea surface height anomaly should be between -300mm and 0	RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
NCDF   HangePeakinessExcludingPolarOPFD2PLRMSHNetCDF   and 70 degrees     RPEPOPFDRMSINN CDF   RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF   The Poakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDSARNCDF   RangePeakinessExcludingPolarOPFD2SARNetCDF   The Poakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOPFD2SINNetCDF   The Poakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOPFD2SINNetCDF   The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPSINNCDF   RangePeakinessExcludingPolarOPSARNetCDF   The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPSINNCDF   RangePeakinessExcludingPolarOPSARNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSEBCONCDF   RangeSeaStrateBiasCorrectionOceanNetCDF   The sea satistab bias correction should be between -300mm and 300mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSSHAOFDPLRMNCDF   RangeSeaSturfaceHeightAnomalyOceanFD3PLRMNetCDF   The sea surfac	RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	
CDF   HangePreakinessExcludingPolarOPFD2FLMKNWRCDP   and 70 degrees     RPEPOPFDSARNCDF   RangePreakinessExcludingPolarOPFD2SARNetCDF   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 4000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPSINNCDF   RangePeakinessExcludingPolarOPLRMNetCDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RPEPOPSINNCDF   RangePeakinessExcludingPolarOPSINNECDF   The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSBECONCDF   RangeSeaStateBiasCorrectionOceanNetCDF   The sea state bais correction should be between -500mm and 3000mm (or missing) for surface type = ocean     RSSHAOFDPLRMNCD   RangeSeaSurfaceHeightAnomalyOceanFD3PLEMDEF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean     RSSHAONCDF   RangeSeaSurfaceHeightAnomalyOceanExcludingPolar/D2PLRMNetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing		RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	
RPEPOP DSARNCDF   RangePeakinessExcludingPolarOPD2SARNetCDF   and 70 degrees     RPEPOPFDSINNCDF   RangePeakinessExcludingPolarOPD2SINNetCDF   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     RPEPOPSINNCDF   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 surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean     RSSHAOFDNCDF   RangeSeaSurfaceHeightAnomalyOceanFD3PLENNetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean     RSSHAONCDF   RangeSeaSurfaceHeightAnomalyOceanFD3PLENNetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean     RSWHOEPFDNCDF   RangeSeaSurfaceHeightAnomalyOceanExcludingPolarFD2NEtDFD   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for sur		RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	
RPEPOP Distinctor   and 20 degrees   and 20 degrees     RPEPOPLRMINCDF   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     RSSHAOFDPLRMINCDF   RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean     RSSHAOFDPLRMINCDF   RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSSHAOFDPLRMINCDF   RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF   The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees     RSWHOEPFDNCDF   RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF   The significantwave height should b	RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	
Reference   Number   Name   Number   Numer   Numer   Numer <td>RPEPOPFDSINNCDF</td> <td>RangePeakinessExcludingPolarOPFD2SINNetCDF</td> <td></td>	RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	
HPEPOPSARNCDF HangePeakinessExcludingPolar/DPSARNECDF and 70 degrees   RPEPOPSINNCDF RangePeakinessExcludingPolar/OPSINNetCDF 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   RSSHAOFDPLRIMNCD RangeSeaSurfaceHeightAnomalyOceanFD3PLRIMNetCDF The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean   RSSHAOFDPLRIMNCD RangeSeaSurfaceHeightAnomalyOceanFD3PLRIMNetCDF The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean   RSWHOEPFDNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF The sea surface 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   RSWHOEPFDPLRMNCF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 150000mm (or missing	RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	
REFEODS INNOD RangePeakInssExcludingPolarOPSININGCOP and 70 degrees   RSSBCONCDF RangeSeaStateBiasCorrectionOceanNetCDF The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean   RSSHAOFDPLRMNCD 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 sea surface height anomaly should be between -3000mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPFDPLRMNC RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF Rel_Time_ASC_Node_Stop_v2_NetCDF   SoOHHI	RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	
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   RSWHOEPFDPLRMNC RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70	RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	
RSSHACPDNCDF RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF ocean   RSSHAONCDF 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 -3000mm 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   RSWHOEPFDPLRMNC RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_S	RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
F HangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF 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 DF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SOOHHIFHD SameOrOneHigher1HzIndexFor20HzData The 1Hz 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	RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	
RSSHAONCDF HangeSeasUrraceHeightAnomalyOceanNetCDF ocean ocean   RSWHOEPFDNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPFDPLRMNC RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF Rel_Time_ASC_Node_Stop mismatch   SOOHHIFHD SameOrOneHigher1HzIndexFor20HzData The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample   SCSTODHRNCDF SequenceCounterStepTODHRNetCDF The sequence counter should be modulo 4 higher with regard to the previous sequence counter	RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	
RSWHOEPPDNCDP RangeSignificantWaveHeightOceanExcludingPolarD2NetCDP latitudes between -70 and 70 degrees   RSWHOEPPDPLRMNC RangeSignificantWaveHeightOceanExcludingPolarD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF Rel_Time_ASC_Node_Stop mismatch   SOOHHIFHD SameOrOneHigher1HzIndexFor20HzData The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample   SCSTODHRNCDF SequenceCounterStepTODHRNetCDF The sequence counter should be modulo 4 higher with regard to the previous sequence counter	RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	
DF HangeSignificantWaveHeightOceanExcludingPolarN22PLHMINEtCDF latitudes between -70 and 70 degrees   RSWHOEPNCDF RangeSignificantWaveHeightOceanExcludingPolarNetCDF The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF Rel_Time_ASC_Node_Stop mismatch   SOOHHIFHD SameOrOneHigher1HzIndexFor20HzData The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample   SCSTODHRNCDF SequenceCounterStepTODHRNetCDF The sequence counter should be modulo 4 higher with regard to the previous sequence counter	RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	
RSWHOEPRCDF HangesignificantWaveHeightOceanExcludingPolarNetCDF latitudes between -70 and 70 degrees   SPHRTASCNSNCDF SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF Rel_Time_ASC_Node_Stop mismatch   SOOHHIFHD SameOrOneHigher1HzIndexFor20HzData The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample   SCSTODHRNCDF SequenceCounterStepTODHRNetCDF The sequence counter should be modulo 4 higher with regard to the previous sequence counter		RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	
SOOHHIFHD   SameOrOneHigher1HzIndexFor2OHzData   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	RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	
SCSTODHRNCDF SequenceCounterStepTODHRNetCDF The sequence counter should be modulo 4 higher with regard to the previous sequence counter	SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
	SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODNCDF SequenceCounterStepTODNetCDF The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter	SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
	SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

### 7.3 Missing QCC Reports

Number of products with missing QCC reports: 0