

QA4EO Daily Report for NOP data:

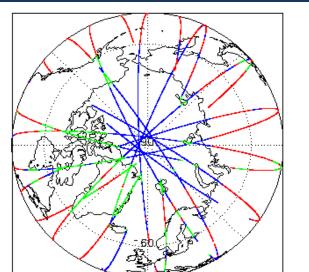
<u>12/12/2021</u>

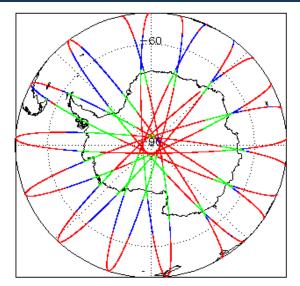
anaut Duaduation.	13-Dec-2021	Check	L1 & L2
Report Production:	13-Dec-2021	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:		Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal
Data Used:	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal
Data Used:	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
		Measurement Quality Flag Check	See Section 5.6
		Ocean Retracking Quality Check	See Section 5.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2

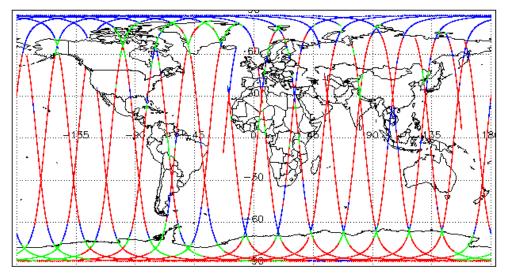
1. Overview

Mission / Instru	ment News
11-Dec-2021	None
12-Dec-2021	None
13-Dec-2021	Nothing planned

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
Star Tracker(s) in use:	Star Tracker 1 & 2

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).

4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and	d SPH in order to identify any inco	nsistencies and/or errors raised by the ground-segment processing chain.
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1E OSARIn chains. A modification is required in the next release.	B IOPR and IOPN products becau	ise the I1b_processing_quality_hr field is not correctly configured in the OSAR and
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	e-determined baseline and also to	check the validity of Auxiliary Data Files is correct.
Dynamic Atmospheric Correction: The DAC is missing in all products becau	se the auxiliary files required are	not available in time for processing. This known and expected behaviour.
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag for each measurement record	d. The bit value of this flag indicat	es any problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measuren	nent record. The bit value of this f	lag indicates any problems when set.
Attitude Correction Missing: This flag is currently set in error for NOPR pro		
Number of products with errors: 0	-	
4.6.L.1.B. Wayoform Group Data Chock		
4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement record	-	es any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record	-	es any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17	is to be expected.	
CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data flag for each measurement record CryoSat L1B data includes a waveform data includes a waveform data includes a waveform CryoSat L1B data includes a waveform data includes a waveform data includes a waveform data includes a waveform CryoSat L1B data includes a waveform data includes a waveform data includes a waveform data includes a waveform CryoSat L1	is to be expected.	Description
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001	is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001	is to be expected. Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001	is to be expected. Test Failed Loss of Echo Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001	Test Failed Loss of Echo Loss of Echo Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T083351_20211212T083443_C001	Is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T083351_20211212T083443_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001	Is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T02601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T083351_20211212T083443_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001	Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T083351_20211212T083443_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T095558_C001	Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T095558_C001 CS_OFFL_SIR_NOPN1B_20211212T115137_20211212T15403_C001	Is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T035558_C001 CS_OFFL_SIR_NOPN1B_20211212T15137_20211212T13252_C001	Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T02601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T083443_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T095588_C001 CS_OFFL_SIR_NOPN1B_20211212T15137_20211212T15403_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T133252_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T15444_C001	Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T02601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T083443_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T095558_C001 CS_OFFL_SIR_NOPN1B_20211212T15137_20211212T13252_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T133252_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T133252_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T133252_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T133252_C001 CS_OFFL_SIR_NOPN1B_20211212T013235_20211212T010823_C001	Is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T02601_C001 CS_OFFL_SIR_NOPM1B_20211212T040051_20211212T040335_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T035558_C001 CS_OFFL_SIR_NOPN1B_20211212T15137_20211212T15403_C001 CS_OFFL_SIR_NOPN1B_20211212T15355_20211212T13252_C001 CS_OFFL_SIR_NOPN1B_20211212T0102450_20211212T034325_C001 CS_OFFL_SIR_NOPN1B_20211212T15355_20211212T1544_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T010823_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T010823_C001 CS_OFFL_SIR_NOPR1B_20211212T010121_20211212T04446_C001 CS_OFFL_SIR_NOPR1B_20211212T034555520211212T04446_C001	Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product 17 CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T002948_20211212T002601_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T026035_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T002839_C001 CS_OFFL_SIR_NOPM1B_20211212T002450_20211212T0034520_C001 CS_OFFL_SIR_NOPN1B_20211212T034306_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T095423_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T05423_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T1535_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T034336_20211212T034520_C001 CS_OFFL_SIR_NOPN1B_20211212T010323_C001 CS_OFFL_SIR_NOPN1B_20211212T132836_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T01213253_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T013252_C001 CS_OFFL_SIR_NOPN1B_20211212T010121_20211212T013252_C001 CS_OFFL_S	Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo
CryoSat L1B data includes a waveform data flag for each measurement record > Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 17 Product CS_OFFL_SIR_NOPM1B_20211212T012346_20211212T013520_C001 CS_OFFL_SIR_NOPM1B_20211212T013705_20211212T014805_C001 CS_OFFL_SIR_NOPM1B_20211212T020948_20211212T022601_C001	Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo

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:

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).

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.

44

Number of products with errors:

•		
Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20211212T013642_20211212T013703_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_20211212T140338_20211212T141841_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_20211212T002450_20211212T002839_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20211212T010823_20211212T011057_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_20211212T020336_20211212T020453_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_20211212T024323_20211212T024931_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_20211212T034306_20211212T034520_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_20211212T042544_20211212T042726_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_20211212T052229_20211212T052714_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_20211212T061403_20211212T061642_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_20211212T074506_20211212T074855_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_20211212T082626_20211212T082653_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_20211212T084609_20211212T084736_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20211212T092447_20211212T092802_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_20211212T093315_20211212T093432_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_20211212T111221_20211212T111335_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_20211212T115137_20211212T115403_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	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_20211212T115435_20211212T115559_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_20211212T132836_20211212T133252_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20211212T133402_20211212T133508_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_20211212T142759_20211212T143030_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_20211212T160708_20211212T161042_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_20211212T164838_20211212T165230_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_20211212T174819_20211212T175001_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_20211212T205728_20211212T205850_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_20211212T210417_20211212T210731_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_20211212T223659_20211212T223813_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_20211212T224315_20211212T224634_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_20211212T033845_20211212T034305_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_20211212T051822_20211212T052229_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_20211212T065257_20211212T070308_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_20211212T082519_20211212T082626_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_20211212T083626_20211212T084414_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_20211212T101615_20211212T102638_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_20211212T115559_20211212T120330_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_20211212T133508_20211212T134030_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_20211212T143030_20211212T143252_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20211212T150359_20211212T150431_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_20211212T151407_20211212T152102_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_20211212T153444_20211212T154259_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_20211212T165230_20211212T165737_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_20211212T182941_20211212T183804_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_20211212T200842_20211212T201615_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_20211212T202530_20211212T202717_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:

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.

0

92

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20211211T234041_20211212T001101_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_20211212T001126_20211212T001356_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_20211212T002927_20211212T010121_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_20211212T011453_20211212T011757_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_20211212T011952_20211212T012332_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_20211212T012346_20211212T013520_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_20211212T013705_20211212T014805_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_20211212T020453_20211212T020702_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_20211212T020948_20211212T022601_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_20211212T024225_20211212T024322_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_20211212T024931_20211212T025213_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_20211212T025230_20211212T025658_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_20211212T025926_20211212T031346_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_20211212T031526_20211212T031809_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_20211212T033102_20211212T033420_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_20211212T040051_20211212T040335_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_20211212T040339_20211212T042429_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_20211212T042726_20211212T043607_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_20211212T043833_20211212T050328_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_20211212T053528_20211212T060257_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_20211212T060942_20211212T061402_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_20211212T061752_20211212T064150_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_20211212T071050_20211212T074134_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_20211212T074856_20211212T075443_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_20211212T075729_20211212T080227_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_20211212T080608_20211212T081310_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_20211212T083351_20211212T083443_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_20211212T084736_20211212T092120_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_20211212T092802_20211212T093315_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_20211212T093858_20211212T095423_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_20211212T101035_20211212T101140_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_20211212T102638_20211212T103612_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_20211212T103857_20211212T110026_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_20211212T110623_20211212T110803_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_20211212T110810_20211212T111221_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_20211212T111703_20211212T113634_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH 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_20211212T113713_20211212T114148_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_20211212T120735_20211212T121140_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_20211212T121157_20211212T123239_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_20211212T123241_20211212T123943_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_20211212T124138_20211212T124703_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_20211212T124722_20211212T124942_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_20211212T125808_20211212T131037_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_20211212T131139_20211212T132836_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_20211212T133252_20211212T133402_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_20211212T135211_20211212T140135_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_20211212T140338_20211212T141841_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_20211212T142106_20211212T142601_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_20211212T142621_20211212T142632_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_20211212T143453_20211212T144724_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_20211212T145205_20211212T150359_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_20211212T152647_20211212T152652_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_20211212T154259_20211212T155758_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_20211212T160037_20211212T160516_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_20211212T160520_20211212T160532_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_20211212T161205_20211212T163838_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_20211212T171218_20211212T173250_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_20211212T173341_20211212T173711_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_20211212T174048_20211212T174431_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_20211212T174437_20211212T174447_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_20211212T174453_20211212T174819_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_20211212T175128_20211212T181911_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_20211212T184854_20211212T191607_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_20211212T191851_20211212T192345_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_20211212T192352_20211212T192721_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_20211212T193206_20211212T200526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_NOPM_2_20211212T201754_20211212T201958_C001	and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20211212T205037_20211212T205200_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_20211212T205359_20211212T205417_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_20211212T205850_20211212T210417_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_20211212T211054_20211212T213330_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_20211212T213506_20211212T214429_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_20211212T215656_20211212T215934_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_20211212T220330_20211212T220351_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_20211212T221624_20211212T223318_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_20211212T223814_20211212T224315_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_20211212T224942_20211212T232309_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_20211212T232526_20211212T232545_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_20211212T234759_20211213T001052_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_20211212T075443_20211212T075603_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_20211212T110206_20211212T110623_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_20211212T144724_20211212T144949_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_20211212T144949_20211212T145205_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_20211212T160547_20211212T160554_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_20211212T174819_20211212T175001_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_20211212T200527_20211212T200546_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_20211212T035218_20211212T035258_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_20211212T083211_20211212T083240_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_20211212T134551_20211212T134557_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_20211212T161042_20211212T161204_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_20211212T183828_20211212T183906_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_20211212T210731_20211212T211054_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.

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

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

> OCOG Altimeter Range and Backscatter PLRM Quality Flags: These flags are currently set for occasional records over continental ice.

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20211212T002450_20211212T002839_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 beer set for one or more records.
S_OFFL_SIR_NOPN_2_20211212T010823_20211212T011057_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T014805_20211212T015043_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T020336_20211212T020453_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T020702_20211212T020826_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T024323_20211212T024931_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T025659_20211212T025840_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T033824_20211212T033845_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T034610_20211212T034838_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T043607_20211212T043756_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T060522_20211212T060655_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T061403_20211212T061642_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T093315_20211212T093432_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T095423_20211212T095558_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T111221_20211212T111335_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one on more records.
CS_OFFL_SIR_NOPN_2_20211212T115039_20211212T115050_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 beer set for one or more records.
CS_OFFL_SIR_NOPN_2_20211212T132836_20211212T133252_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T134031_20211212T134104_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one on more records.
CS_OFFL_SIR_NOPN_2_20211212T141923_20211212T142106_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_20211212T144724_20211212T144949_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T144949_20211212T145205_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T160547_20211212T160554_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one of more records.
CS_OFFL_SIR_NOPN_2_20211212T164622_20211212T164745_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_NOPN_2_20211212T164838_20211212T165230_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 bee set for one or more records.

CS_OFFL_SIR_NOPN_2_20211212T170723_20211212T170858_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_20211212T173820_20211212T174048_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_20211212T183805_20211212T183827_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_20211212T192722_20211212T192903_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_20211212T201615_20211212T201624_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_20211212T205728_20211212T205850_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_20211212T210417_20211212T210731_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_20211212T221337_20211212T221623_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_20211212T001356_20211212T001459_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_20211212T010121_20211212T010823_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_20211212T022601_20211212T022813_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_20211212T032209_20211212T032236_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_20211212T033658_20211212T033824_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_20211212T033845_20211212T034305_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_20211212T034520_20211212T034610_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_20211212T042430_20211212T042544_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_20211212T043756_20211212T043832_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_20211212T051822_20211212T052229_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_20211212T065257_20211212T070308_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_20211212T074134_20211212T074506_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_20211212T083211_20211212T083240_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_20211212T083626_20211212T084414_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_20211212T092120_20211212T092447_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_20211212T093432_20211212T093747_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_20211212T093803_20211212T093857_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_20211212T101615_20211212T102638_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_20211212T110026_20211212T110205_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_0FFL_SIR_NOPR_2_20211212T123944_20211212T124015_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_20211212T125128_20211212T125808_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_20211212T131037_20211212T131138_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_20211212T133508_20211212T134030_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_20211212T134600_20211212T134635_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_20211212T134639_20211212T134656_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_20211212T140135_20211212T140338_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_20211212T143030_20211212T143252_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_20211212T150359_20211212T150431_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_20211212T150715_20211212T150838_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_20211212T151407_20211212T152102_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_20211212T153444_20211212T154259_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_20211212T165815_20211212T165954_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_20211212T173250_20211212T173341_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_20211212T182941_20211212T183804_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_20211212T200842_20211212T201615_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_20211212T201625_20211212T201754_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_20211212T205417_20211212T205728_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_20211212T223318_20211212T223659_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_20211212T224634_20211212T224942_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_20211212T232309_20211212T232510_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
12 Quality Flame (4.11- 9.411- DI DM)		

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

181

> 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:

5.7 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20Hz)

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

Ocean Retracking Quality Flag: This flag is currently set for products falling at ocean/ land boundaries, but this is expected.

L2 Retracking Flags (20Hz, PLRM)

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

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

5

1699

141

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	184	184	4	180	0
SIR_NOPR1B	114	114	0	114	0
SIR_NOPN1B	99	99	3	96	0
SIR_NOPM_2	184	184	136	48	0
SIR_NOPR_2	114	114	38	74	2
SIR_NOPN_2	99	99	39	60	0

7.1 QCC Errors

Number of QCC reports with errors:

					Total number	of occurrences	of oach orror				
				1	Total number	of occurrences	of each entor		1		
Product Type RLC	BOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_NOPR_2	2	2	2	2							
Test Description Key:											
Abbreviation	Test na	ne		Details							
RLOBOPNCDF	RangeLat	itudeOrBlankOP_	7NetCDF	Latitude should be between -90E7 and 90E7 - NetCDF							
RL	RangeLat	itude_7		Latitude should be between -90E7 and 90E7							
RLOBOPNCDF	RangeLo	ngitudeOrBlankOF	P_7NetCDF	Longitude should be between -180E7 and 180E7 - NetCDF							
RL	RangeLo	ngitude_7		ongitude should be between -180E7 and 180E7							
	1 -			I							

7.2 QCC Warnings

Number of QCC reports with warnings

			Total numb	er of occurrences of ea	ch warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_NOPM1B	180	0	0	0	0	0	0
SIR_NOPM_2	0	0	39	34	0	39	0
SIR_NOPN1B	94	0	0	0	0	0	0
SIR_NOPN_2	0	0	9	32	4	22	25
SIR_NOPR1B	109	0	0	0	0	0	0
SIR_NOPR_2	0	2	34	46	1	25	18

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	37	0	29	0	0	0	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	17	0	0	0	25	0	32
SIR_NOPR1B	0	0	0	0	0	0	0
SIR NOPR 2	10	1	0	44	0	51	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	25	0	0	10	28	0	4
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	30	13	40	50	27
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	0	45	0	1	60	35	5

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_NOPM1B	0	0	0	0	0	0	
SIR_NOPM_2	34	0	3	0	0	0	
SIR_NOPN1B	0	0	0	0	45	0	
SIR_NOPN_2	26	30	13	0	0	0	
SIR_NOPR1B	0	0	0	0	114	10	
SIR_NOPR_2	37	48	1	6	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	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
	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	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			

RSSHAOFDNCDF		
NOULDINGDE	· · · · · · · · · · · · · · · · · · ·	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD R	· · · · ·	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF R	· · · · ·	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF		The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
		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
SOOHHIFHD Sa	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF Se	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF Se	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