

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

<u>11/05/2023</u>

### IDEAS-QA4E0

Demost Dreduction.	05 May 2000	Check	L1 & L2
Report Production:	25-May-2023	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CriveCat Oscar Drassager	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
L1B & L2 Science Data	Product Header Analysis	Nominal	
		Auxiliary Data File Usage Check	Nominal
We would	love to hear from you!	Auxiliary Correction Error Check	See Section 5.4
Please let us know your feedback about these daily quality reports: What do you like/ dislike? What quality information do you need? Send your feedback to		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
cs2_qc_	team@telespazio.com	QCC Error/ Warning Check	See Section 7.1 and 7.2

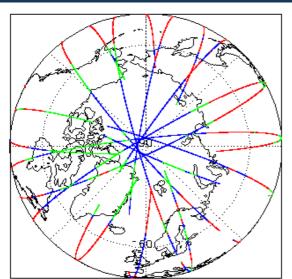
1. Overview

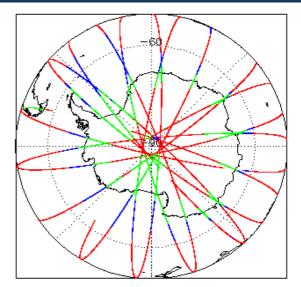
## Mission / Instrument News 10-May-2023 None

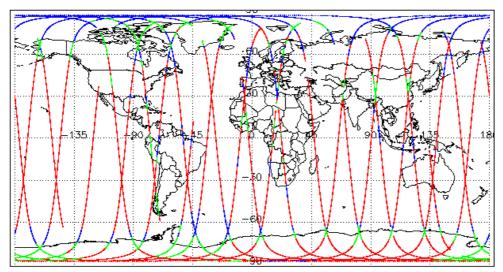
 11-May-2023
 SIRAL unavailability from 17:00:30 to 18:47:09 due to planned orbit manoeuvre

 12-May-2023
 Nothing planned











#### 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). Number of products with errors: 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-determined baseline and also to check the validity of Auxiliary Data Files is correct.				
> Dynamic Atmospheric Correction: The DAC is missing in all products because the auxiliary files required are not available in time for processing. This known and expected behaviour.				
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement record. The bit value of this flag indicates any problems when set.				
Number of products with errors: 0				

#### 4.5 L1B Measurement Confidence Data Check

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

> Attitude Correction Missing: This flag is currently set in error for NOPR products due to a configuration issue. 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:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20230511T000455_20230511T001919_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20230511T114054_20230511T115537_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20230511T212359_20230511T212439_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

#### 4.6 L1B Waveform Group Data Check

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

> Loss of Echo Flag: This flag is currently set for 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_20230511T000455_20230511T001919_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20230511T005304_20230511T010227_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20230511T123039_20230511T124124_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20230511T234911_20230512T000040_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T011937_20230511T012043_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T025851_20230511T030437_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T043209_20230511T043221_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T043231_20230511T043239_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T074750_20230511T074838_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T124554_20230511T124630_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T124844_20230511T125100_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T135145_20230511T135618_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20230511T215905_20230511T220417_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T011318_20230511T011352_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T011641_20230511T011936_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T060756_20230511T060948_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T061717_20230511T062111_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T075159_20230511T080007_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T092850_20230511T093008_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T093243_20230511T093959_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T124124_20230511T124440_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20230511T212338_20230511T212344_C001	Loss of Echo	The tracking echo is missing for one or more records

#### 5. NOP Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a 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:
0

#### 5.3 L2 Auxiliary Data File Usage Check

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

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

0

#### 5.4 L2 Auxiliary Correction Error Check

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

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

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

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> 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_NOPN_2_20230511T002252_20230511T002641_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_20230511T011230_20230511T011318_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_20230511T011937_20230511T012043_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_20230511T020239_20230511T020438_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_20230511T025851_20230511T030437_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_20230511T043307_20230511T043444_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_20230511T043834_20230511T043853_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_20230511T052133_20230511T052253_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_20230511T061658_20230511T061717_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_20230511T070122_20230511T070447_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_20230511T080007_20230511T080241_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_20230511T084027_20230511T084347_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_20230511T093008_20230511T093242_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_20230511T102752_20230511T102912_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_20230511T111041_20230511T111145_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_20230511T120502_20230511T120703_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_20230511T124844_20230511T125100_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_20230511T135145_20230511T135618_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_20230511T142425_20230511T142935_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_20230511T143008_20230511T143042_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_20230511T152420_20230511T152638_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_20230511T160218_20230511T160655_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_20230511T192226_20230511T192418_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_20230511T201324_20230511T201449_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_20230511T202004_20230511T202305_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_20230511T215325_20230511T215631_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_20230511T215906_20230511T220417_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_20230511T225011_20230511T225358_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20230511T233218_20230511T233618_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_20230511T002143_20230511T002252_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_20230511T011318_20230511T011352_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_20230511T011354_20230511T011452_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_20230511T011500_20230511T011641_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_20230511T011641_20230511T011936_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_20230511T043445_20230511T043834_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_20230511T043854_20230511T043910_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_20230511T061301_20230511T061658_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_20230511T061717_20230511T062111_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_20230511T075159_20230511T080007_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_20230511T093243_20230511T093959_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_20230511T111146_20230511T111902_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_20230511T124125_20230511T124440_C001	Mean Sea Surface (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 Total Geocentric Ocean Tide (solution 1: GOT and 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPR_2_20230511T125101_20230511T125257_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_20230511T125257_20230511T125625_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_20230511T142935_20230511T143007_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_20230511T143042_20230511T143459_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_20230511T143509_20230511T143558_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_20230511T160759_20230511T161313_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_20230511T161313_20230511T161712_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

#### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20230511T000455_20230511T001919_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_20230511T114054_20230511T115537_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_20230511T212359_20230511T212439_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:

Test Failed

Description

CS_OFFL_SIR_NOPM_2_20230510T234602_20230511T000255_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_20230511T000455_20230511T001919_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_20230511T002941_20230511T003349_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_20230511T003548_20230511T004834_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_20230511T004952_20230511T005103_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_20230511T005304_20230511T010227_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_20230511T012924_20230511T014156_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_20230511T014721_20230511T020058_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_20230511T020439_20230511T021252_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_20230511T021525_20230511T023115_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_20230511T023432_20230511T023822_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_20230511T024520_20230511T024522_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_20230511T031353_20230511T034019_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_20230511T034330_20230511T034532_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_20230511T034611_20230511T035125_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_20230511T035500_20230511T041921_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_20230511T045141_20230511T051907_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_20230511T052538_20230511T053142_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_20230511T053327_20230511T060055_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_20230511T060948_20230511T061121_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 Attimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_NOPM_2_20230511T062453_20230511T065803_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_20230511T070448_20230511T071014_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_20230511T071236_20230511T071805_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_20230511T073736_20230511T073828_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_20230511T074856_20230511T075159_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_20230511T080348_20230511T083749_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_20230511T084456_20230511T084905_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_20230511T085156_20230511T091042_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_20230511T094239_20230511T101605_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_20230511T101911_20230511T102351_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_20230511T102411_20230511T102752_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_20230511T103452_20230511T110617_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_20230511T112525_20230511T113905_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_20230511T114054_20230511T115537_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_20230511T115734_20230511T120250_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_20230511T121304_20230511T122630_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_20230511T123039_20230511T124124_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_20230511T130812_20230511T131834_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_20230511T132014_20230511T133427_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_20230511T133701_20230511T134202_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_20230511T135035_20230511T135145_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_20230511T135618_20230511T140308_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_20230511T140734_20230511T141224_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_20230511T141507_20230511T142055_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_20230511T145137_20230511T151313_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_20230511T151732_20230511T152120_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_20230511T152759_20230511T155153_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_20230511T162815_20230511T165323_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_20230511T165515_20230511T170030_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_20230511T184709_20230511T192023_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_20230511T193358_20230511T193450_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_20230511T200123_20230511T201151_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_20230511T201449_20230511T202003_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_20230511T202633_20230511T210038_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20230511T211153_20230511T211530_C001	Attimeter Range and Backscatter Quality Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter 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
CS_OFFL_SIR_NOPM_2_20230511T212152_20230511T212338_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_NOPM_2_20230511T213105_20230511T213711_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_NOPM_2_20230511T213858_20230511T214957_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_20230511T215631_20230511T215905_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_20230511T220607_20230511T223610_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_20230511T223647_20230511T223857_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_20230511T225442_20230511T232641_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_20230511T233618_20230511T233813_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_20230511T234015_20230511T234318_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_20230511T234513_20230511T234851_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_20230511T234911_20230512T000040_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_20230511T140309_20230511T140734_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_20230511T193634_20230511T193757_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_20230511T061717_20230511T062111_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_20230511T102912_20230511T103212_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_20230511T120703_20230511T120721_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_20230511T120834_20230511T121304_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_20230511T211530_20230511T212152_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_20230511T233342_20230511T233344_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

#### L2 Quality Flags (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.

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Product	Test Failed	Description
CS OFEL SIR NORN 2 20230511T002252 20230511T002641 C001	Altimeter Bange 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

Count of Transmission Trans	CS_OFFL_SIR_NOPN_2_20230511T023943_20230511T024329_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
1.195         COCO Minore Rugs Quark (FIM)         Iso COO Rugs and Balacter Cally Rugs have been reling to each call of the particular cally Rugs and Balacter Cally Rugs and Balact	CS_OFFL_SIR_NOPN_2_20230511T025851_20230511T030437_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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
Disp. Gen., Gen., Gen., MORY, 2, 2003011100000, J2020011100000, J202000, J2020000, J20200000, J20200000, J2020000, J2020000, J202000, J202000,	CS_OFFL_SIR_NOPN_2_20230511T034532_20230511T034611_C001	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or
CB: ORL: BR: NOPK 2 BITERED (1106207 D2028) 11062642 CO11       Image: Control on the contrelease on the control on the control on the control on	CS_OFFL_SIR_NOPN_2_20230511T035126_20230511T035403_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C2       OPTL_BR_NOPN_2_2020011100303_2020011100303_0001       The Description Control of the Description C	CS_OFFL_SIR_NOPN_2_20230511T043307_20230511T043444_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C4_OFFL_SR_NOPK_2_3023011102312_3023011102312_00230111102312_00230111	CS_OFFL_SIR_NOPN_2_20230511T043834_20230511T043853_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
BS_DEFL_SR_NOPK_2_0020011100101_002005111001042_00001         Image Statuster Duality PLML OCCU         Image Statuste	CS_OFFL_SIR_NOPN_2_20230511T053142_20230511T053307_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
DOOG Backster Calify Ca	CS_OFFL_SIR_NOPN_2_20230511T061214_20230511T061300_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C6 OFFL_SIR_NOPN_2_202305111707104_202305111707131_001       and Backcenter Ousling PLM, COOG       index Manuel Angeles Angeles Substantiation and Substantiation Angeles Angeles Angeles Substantiation Angeles Ange	CS_OFFL_SIR_NOPN_2_20230511T062111_20230511T062452_C001	OCOG Backscatter Quality	
Coord Randscrift Outly Flags     And PCMP, 2, 00200511102142, 00200511102140, 0001     Coord Attenter Range Quality PLRM,     Coord Attenter Range SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags have been set for one or more records     Coord Attenter Range, SNH, SWH and Backscatter Quality Flags h	CS_OFFL_SIR_NOPN_2_20230511T071014_20230511T071131_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCCO Backscatter Quality     more records     Coco Attimeter Range, SHA, SWH     and Backscatter Quality     Page     and the COCOG Attimeter Range and Backscatter Quality Plage     and the COCOG Attimeter Range, SHA, SWH     and the COCOG Range and Backscatter Quality Plags     and the COCOG Range and Backscatter Q	CS_OFFL_SIR_NOPN_2_20230511T072526_20230511T072547_C001		
CS_OFFL_SIR_NOPN_2_20230511T03308_20230511T033242_C001       and Backscatter Quality FIBM, COCO       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FiBgs have been set for one or mor	CS_OFFL_SIR_NOPN_2_20230511T091042_20230511T091408_C001	OCOG Backscatter Quality	
GS_OFFL_SIR_NOPN_2_20230511T102752_20230511T102912_C001         and Backszetter Quality PLRM. COCO Attimuter Range and Backszetter Quality PLRM. COCO Attimuter Range and Backszetter Quality PLRM. COCO Backszetter Qua	CS_OFFL_SIR_NOPN_2_20230511T093008_20230511T093242_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
GS_OFFL_SIR_NOPN_2_20230511T120721_20230511T120732_20230511T120732_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120721_20230511T120722_20230511T120722_20230511T120722_20230511T120502_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T120502_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T130519_20230511T130519_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T130519_20230511T130512_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T135145_20230511T130518_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T140734_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T140734_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T140734_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142435_20230511T142435_C001       OCCGA Altimeter Range Aud Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_NOPN_2_20230511T102752_20230511T102912_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OS_OPPL_SIL_NORM_2_202305111125618_202305111125602_001         OCOG Backscatter Quality         more records           CS_OFFL_SIR_NOPN_2_202305111125625_202305111125602_001         and Backscatter Quality PLM, QOOG Attimeter Range SHA, SWH         The OCOG Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_C001         OCOG Altimeter Range, SHA, SWH and Backscatter Quality PLM, QOOG Attimeter Range and Backscatter Quality PLM, QOOG Attimeter Range and Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142435_C001         OCOG Altimeter Range Quality PLM, QOOG Attimeter Range and Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one or more records           CS_OFFL_SIR_NOPN_2_20230511T144532_20230511T1455826_C001         OCOG Altimeter Ra	CS_OFFL_SIR_NOPN_2_20230511T120721_20230511T120833_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPN_2_20230511T125625_20230511T125622_0001       and Backscatter Quality PLBN, OCCG       Inter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T130519_20230511T140734_0001       OCCG Altimeter Range Quality PLBN, OCCG       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_0001       OCCG Altimeter Range Quality PLBN, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       OCCG Altimeter Range Quality PLRN, OCCG Altimeter Range Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       OCCG Altimeter Range Quality PLRN, OCCG Altimeter Range Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       OCCG Altimeter Range Quality PLRN, OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T146232_00230511T146935_C001 <td< td=""><td>CS_OFFL_SIR_NOPN_2_20230511T124844_20230511T125100_C001</td><td>OCOG Backscatter Quality</td><td></td></td<>	CS_OFFL_SIR_NOPN_2_20230511T124844_20230511T125100_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_NOPN_2_20230511T130519_20230511T130612_C001       and Backscatter Quality PLM. OCCG Alimeter Range and Backscatter Quality PLRM       and the OCCG Alimeter Range and Backscatter Quality PLRM       The OCCG Alimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_C001       OCCG Alimeter Range Quality PLRM, OCCG Backscatter Quality PLRM, OCCG Alimeter Range and Backscatter Quality Flags have been set for one or more records       The OCCG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       OCCG Alimeter Range and Backscatter Quality PLRM       The OCCG Alimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T144532_20230511T142935_C001       OCCG Alimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T1455618_20230511T14931_C001       OCCG Alimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T146218_20230511T160655_C001       O	CS_OFFL_SIR_NOPN_2_20230511T125625_20230511T125802_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_C001       OCOG Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T142925_20230511T142935_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records       The OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T144532_20230511T144931_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_20230511T1455618_20230511T155826_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_20230511T160218_20230511T16055_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T16243_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_20230511T162410_20230511T16243_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG	CS_OFFL_SIR_NOPN_2_20230511T130519_20230511T130812_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPN_2_20230511T140305_20230511T140735_0001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T16055_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records       The OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Range and Backscatter Quality Flags have been se	CS_OFFL_SIR_NOPN_2_20230511T135145_20230511T135618_C001		
CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001       and Backscatter Quality PLRM, OCCG Altimeter Range and Backscatter Quality PLRM       Inte OCCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T144532_20230511T144931_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T155618_20230511T155826_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001       OCCG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCG Range and Backscatter Quality Flags and the OCCG Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001       Ocean Altimeter Range Quality PLRM, Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162543_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162543_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Q	CS_OFFL_SIR_NOPN_2_20230511T140309_20230511T140734_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_NOPN_2_20230511T144332_20230511T144931_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_NOPN_2_20230511T155618_20230511T155826_C001       OCOG Backscatter 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_20230511T160218_20230511T160655_C001       Ocog Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001       OCOG Attimeter Range and Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_NOPN_2_20230511T142425_20230511T142935_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPN_2_20230511T155618_20230511T155826_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_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_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_NOPN_2_20230511T144532_20230511T144931_C001		
CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001       and Backscatter Quality PLRM, OCOG Atimeter Range and Backscatter Quality PLRM       Inte Ocean Atimeter Range, SSFA, SWH and Backscatter Quality Flags and the OCOG Atimeter Range and Backscatter Quality         CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_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_20230511T162410_20230511T162543_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_20230511T155618_20230511T155826_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_NOPN_2_202305111162410_202305111162543_C001 OCOG Backscatter Quality more records OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_NOPN_2_20230511T160218_20230511T160655_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_NOPN_2_20230511T162410_20230511T162543_C001		
	CS_OFFL_SIR_NOPN_2_20230511T192028_20230511T192132_C001		

CS_OFFL_SIR_NOPN_2_20230511T192226_20230511T192418_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_20230511T193127_20230511T193310_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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_20230511T193634_20230511T193757_C001	PLRM 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_20230511T194204_20230511T194214_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_20230511T202004_20230511T202305_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_20230511T215906_20230511T220417_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_20230511T225011_20230511T225358_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_20230511T233218_20230511T233618_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_20230511T000256_20230511T000435_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_20230511T002143_20230511T002252_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_20230511T005103_20230511T005157_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_20230511T011354_20230511T011452_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_20230511T011500_20230511T011641_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_20230511T012230_20230511T012415_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_20230511T012512_20230511T012704_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_20230511T014156_20230511T014338_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_20230511T014353_20230511T014551_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_20230511T030437_20230511T030700_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_20230511T034019_20230511T034212_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_20230511T043003_20230511T043209_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_20230511T043445_20230511T043834_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_20230511T051907_20230511T052133_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_20230511T060756_20230511T060948_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_20230511T061301_20230511T061658_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_20230511T061717_20230511T062111_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_20230511T065803_20230511T070122_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_20230511T071131_20230511T071236_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_20230511T074453_20230511T074735_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_20230511T075159_20230511T080007_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_20230511T093243_20230511T093959_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_20230511T094001_20230511T094027_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_20230511T111146_20230511T111902_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_20230511T122630_20230511T122844_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_20230511T124125_20230511T124440_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_20230511T124449_20230511T124553_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_20230511T124631_20230511T124844_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_20230511T125101_20230511T125257_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_20230511T125257_20230511T125625_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_20230511T143042_20230511T143459_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_20230511T145021_20230511T145136_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_20230511T160759_20230511T161313_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_20230511T161313_20230511T161712_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_20230511T161804_20230511T161927_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_20230511T192132_20230511T192226_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_20230511T193557_20230511T193634_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_20230511T193757_20230511T193924_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_20230511T195832_20230511T195923_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_20230511T201151_20230511T201323_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_20230511T202306_20230511T202633_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_20230511T232642_20230511T233218_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
12 Quality Floor (1 Hz & 1 Hz DI PM)		

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

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

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

#### 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.

14

55

139

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	151	151	4	147	0
SIR_NOPR1B	122	122	0	121	1
SIR_NOPN1B	101	101	1	100	0
SIR_NOPM_2	151	151	102	49	0
SIR_NOPR_2	122	122	49	70	3
SIR_NOPN_2	101	101	39	61	1

#### 7.1 QCC Errors

#### Number of QCC reports with errors:

	Total number of occurrences of each error										
Product Type	EOVSNCDF	MPHSVSNCDF	RLOBOPNCDF	RL	RL	RLOBOPNCDF	RL	RL	-	-	-
SIR_NOPN_2	0	0	1	0	1	1	0	1			
SIR_NOPR1B	1	1	0	1	1	0	1	1			
SIR_NOPR_2	0	0	2	0	3	2	0	3			

# Test Description Key: Abbreviation Test name Details EOVSNCDF EnumOrbitVectorSourceNetCDF Orbit vector source should match one of the allowed enumeration values - NetCDF MPHSVSNCDF MPH\_State\_Vector\_Source\_NetCDF State\_Vector\_Source mismatch RLOBOPNCDF RangeLatitudeOrBlankOP\_7NetCDF Latitude should be between -90E7 and 90E7 - NetCDF

#### 7.2 QCC Warnings

SIR\_NOPR\_2

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			Total nu	imber of occurrences of	each warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RACOGOBOFDNCDF	RBSZOPOEPFDNCDF
SIR_NOPM1B	147	0	0	0	0	0	0
SIR_NOPM_2	0	0	32	34	0	0	38
SIR_NOPN1B	98	0	0	0	0	0	0
SIR_NOPN_2	0	1	8	31	3	0	22
SIR_NOPR1B	116	0	0	0	0	1	0
SIR NOPR 2	0	2	34	41	1	0	28

Product Type	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	32	2	30	0	0	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	26	18	1	0	0	23	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	19	11	0	0	44	0	53

Product Type	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	21	0	0	7	22	0
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	33	0	0	26	18	45	53
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	0	0	44	0	3	59	27
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Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF
SIR_NOPM1B	0	0	0	0	1	0	0
SIR_NOPM_2	5	27	0	4	1	0	0
SIR_NOPN1B	0	0	0	0	0	0	44
SIR_NOPN_2	34	28	32	11	0	1	0
SIR NOPR1B	0	0	0	0	0	0	122

2

0

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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
RACOGOBOFDNCDF	RangeAltitudeCOGOrBlankOceanFD3NetCDF	#N/A
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean

RPEPOPFDLRMNCDF		The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF		The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF		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		The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
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	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter

#### 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0