

1. Overview

Report Production:	04-Aug-2022
Processor Used:	CryoSat Ocean Processor
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data

Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5
Measurement Quality Flag Check	See Section 5.6
Ocean Retracking Quality Check	See Section 5.7
QCC Error/ Warning Check	See Section 7.1 and 7.2

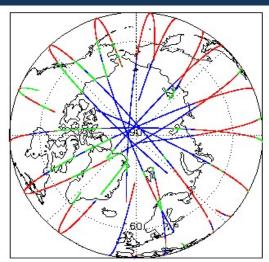
Mission / Instrument News

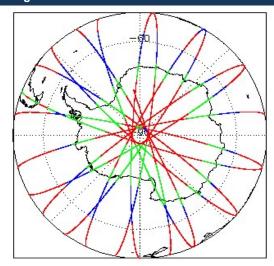
02-Aug-2022 None

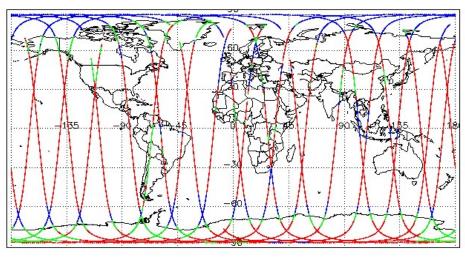
03-Aug-2022 SIRAL unavailability due to orbit manoeuvre 16:29:46 - 18:15:58

04-Aug-2022 Nothing planned

2. Global Coverage









3. Instrument Configuration

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

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

4. NOP Level 1B Data Quality Check

4.1 L1B Product Format Check

4.2 L1B Product Header Analysis

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

> L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B NOPR and NOPN products because the I1b_processing_quality_hr field is not correctly configured in the OSAR and OSAPI shairs. A modification is required in the part release.

Number of products with errors:

4.3 L1B Auxilary Data File Usage Check

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

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

Number of products with errors:

4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

0

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 undated in the next SW undate.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20220803T161916_20220803T162519_C001		There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20220803T181800_20220803T182113_C001		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.

umber of products with errors: 11

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20220803T025200_20220803T030700_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20220803T055142_20220803T061858_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T031155_20220803T031408_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T122218_20220803T122744_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T195338_20220803T195735_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T195738_20220803T195817_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T211211_20220803T211408_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20220803T212109_20220803T212204_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20220803T005155_20220803T005802_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20220803T090736_20220803T091149_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20220803T100509_20220803T100845_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:

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 Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20220803T000343_20220803T003845_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T004148_20220803T004701_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T004708_20220803T004714_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T004721_20220803T005012_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T005803_20220803T012833_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T014212_20220803T014758_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T014800_20220803T014807_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T014810_20220803T020138_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T020325_20220803T021823_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T022057_20220803T022600_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T022607_20220803T022614_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T022620_20220803T022632_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T022639_20220803T022804_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T023528_20220803T024540_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T024646_20220803T024919_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T025200_20220803T030700_C001	GIM Ionospheric Correction, Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T032103_20220803T033650_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T033904_20220803T034147_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T034326_20220803T035657_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T040012_20220803T040511_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T040519_20220803T040531_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T040537_20220803T040546_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T040554_20220803T040658_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T041315_20220803T043537_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T043552_20220803T044525_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T044803_20220803T044837_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T045930_20220803T050628_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T050630_20220803T050727_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T050831_20220803T050912_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T051329_20220803T051405_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records

CS_OFFL_SIR_NOPM_2_20220803T051452_20220803T053533_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T054057_20220803T054429_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T054437_20220803T054446_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T054452_20220803T054813_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T055141_20220803T061858_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T061900_20220803T061949_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T064057_20220803T064158_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T064216_20220803T064922_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T065011_20220803T065123_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T065126_20220803T071540_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T071840_20220803T072344_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T072352_20220803T072719_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T073131_20220803T080451_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T081720_20220803T082401_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T082434_20220803T082522_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T082543_20220803T082608_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T082718_20220803T083056_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T083058_20220803T083735_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T083931_20220803T084058_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T084110_20220803T084632_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T085029_20220803T085451_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T085840_20220803T090418_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T090530_20220803T090620_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T091149_20220803T094418_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T094514_20220803T094547_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T094619_20220803T094657_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T094659_20220803T094717_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T095637_20220803T095816_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T100253_20220803T100417_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T100455_20220803T100508_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records

CS_OFFL_SIR_NOPM_2_20220803T100845_20220803T101019_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T101203_20220803T101556_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T101649_20220803T103255_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T103804_20220803T104313_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T105007_20220803T112552_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T113735_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T114750_20220803T115213_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T121042_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T122013_20220803T122217_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T122952_20220803T130549_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPM_2_20220803T145648_20220803T151434_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_NOPN_2_20220803T004009_20220803T004148_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T005013_20220803T005155_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T012834_20220803T013011_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T013357_20220803T013426_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T013431_20220803T013453_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T014034_20220803T014048_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T021915_20220803T022056_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T022632_20220803T022639_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T022804_20220803T023020_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T024541_20220803T024646_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T024920_20220803T024947_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T030758_20220803T031057_C001	GIM Ionospheric Correction, Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20220803T031155_20220803T031408_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T035821_20220803T040011_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T040531_20220803T040537_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T040547_20220803T040554_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T040659_20220803T041144_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records

CS_OFFL_SIR_NOPN_2_20220803T043538_20220803T043552_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T044838_20220803T045232_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T045752_20220803T045826_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T050728_20220803T050831_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T050913_20220803T051247_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T051317_20220803T051329_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T053825_20220803T054056_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T054430_20220803T054437_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T054446_20220803T054452_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T054814_20220803T055004_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T061950_20220803T062427_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T064045_20220803T064056_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T064158_20220803T064216_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T064927_20220803T065011_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T071708_20220803T071840_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T072345_20220803T072351_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T072720_20220803T072852_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records

CS_OFFL_SIR_NOPN_2_20220803T080452_20220803T080640_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T080710_20220803T080824_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T081602_20220803T081626_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T083736_20220803T083931_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T084058_20220803T084109_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T085727_20220803T085840_C001	GIM Ionospheric Correction, Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T090418_20220803T090530_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T090620_20220803T090735_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T094419_20220803T094514_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T094548_20220803T094619_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T094657_20220803T094659_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T095532_20220803T095553_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T095608_20220803T095625_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T095817_20220803T095924_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T100417_20220803T100454_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T101026_20220803T101028_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records

CS_OFFL_SIR_NOPN_2_20220803T101154_20220803T101156_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T101558_20220803T101648_C001	GIM Ionospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T103640_20220803T103804_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T104314_20220803T104622_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20220803T115213_20220803T115306_C001	GIM lonospheric corr	There is an error with the GIM lonospheric correction for one or more records
CS_OFFL_SIR_NOPN_2_20220803T121725_20220803T122012_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20220803T122218_20220803T122744_C001	GIM Ionospheric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GIM lonospheric correction, MSS height (solution 1) and Mean Dynamic Topography height (solution 1) for one or more records

5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20220803T161916_20220803T162519_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_20220803T181759_20220803T182113_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.

2

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20220803T000343_20220803T003845_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_20220803T004148_20220803T004701_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_20220803T004721_20220803T005012_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_20220803T005803_20220803T012833_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_20220803T014212_20220803T014758_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_20220803T014810_20220803T020138_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_20220803T020325_20220803T021823_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_20220803T022057_20220803T022600_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_20220803T023528_20220803T024540_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_20220803T024646_20220803T024919_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_20220803T025200_20220803T030700_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_20220803T033904_20220803T034147_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_20220803T034326_20220803T035657_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_20220803T040012_20220803T040511_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_20220803T040554_20220803T040658_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_20220803T041315_20220803T043537_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_20220803T043552_20220803T044525_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_20220803T051452_20220803T053533_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_20220803T054057_20220803T054429_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_20220803T054452_20220803T054813_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_20220803T055141_20220803T061858_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_20220803T065126_20220803T071540_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_20220803T071840_20220803T072344_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_20220803T073131_20220803T080451_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T081720_20220803T082401_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_20220803T082434_20220803T082522_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_20220803T083058_20220803T083735_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_20220803T085029_20220803T085451_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_20220803T085840_20220803T090418_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_20220803T091149_20220803T094418_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_20220803T094619_20220803T094657_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_20220803T094659_20220803T094717_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_20220803T095637_20220803T095816_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_20220803T101649_20220803T103255_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_20220803T103804_20220803T104313_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
	1	1

CS_OFFL_SIR_NOPM_2_20220803T112542_20220803T113735_C001 CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T113735_C001 CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T113735_C001 CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T113735_C001 CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T113735_C001 CS_OFFL_SIR_NOPM_2_20220803T113542_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T140840_0020803T140850_C001 CS_OFFL_SIR_NOPM_2_20220803T140840_0020803T140850_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_0020803T142550_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_0020803T142550_C001 COCG Allimeter Range CSHA, SWH and Backscatter Quality Flags have been store on one records COCG Allimeter Range and Backscatter Quality Flags have been store on one records COCG Allimeter Range and Backscatter Quality Flags have been store on one records COCG Allimeter Range and Backscatter Quality Flags have been store on one records COCG Allimeter Range CSHA, SWH and Backscatter Qu
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records CS_OFFL_SIR_NOPM_2_20220803T114750_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T11530T_20220803T115213_C001 CS_OFFL_SIR_NOPM_2_20220803T11530T_20220803T12042_C001 CS_OFFL_SIR_NOPM_2_20220803T11530T_20220803T12042_C001 CS_OFFL_SIR_NOPM_2_20220803T122952_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140630_C0003T140630_C00
And Backscatter Quality, CCG Altimeter Range and Backscatter Quality Flags have be set for one or more records CS_OFFL_SIR_NOPM_2_20220803T115307_20220803T121042_C001 CS_OFFL_SIR_NOPM_2_20220803T125952_20220803T120549_C001 CS_OFFL_SIR_NOPM_2_20220803T120552_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T1454543_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145543_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145543_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145543_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145543_C001 CS_OFFL_SIR_NO
and Backscatter Quality CS_OFFL_SIR_NOPM_2_20220803T12952_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T12952_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T130549_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T133628_C001 CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T145532_20220803T145514_C001 CS_OFFL_SIR_NOPM_2_20220803T
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records CS_OFFL_SIR_NOPM_2_20220803T131800_20220803T133628_C001 CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T133628_C001 CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T145523_
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T135111_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T1425323_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142532_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T1425323_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T1425323_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T1425323_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T145323_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145323_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145323_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145323_20220803T1455433_C001 CS_OFFL_SIR_NOPM_2_20220803T1455323_20220803T1455433_C001 CS_OFFL_SIR_NOPM_2_20220803T1455433_C001 CS_OFFL_SIR_NOPM_2_20220803T1455433
CS_OFFL_SIR_NOPM_2_20220803T133733_20220803T140630_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_NOPM_2_20220803T140244_20220803T140630_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T1425323_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1454343_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T1455433_C001 CS_OFFL_SIR_NOPM_2_20220803T1455333_20220803T1455433_C001
Backscatter Quality CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T142350_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 CS_OFFL_SIR_NOPM_2_20220803T145333_20220803T145433_C001
CS_OFFL_SIR_NOPM_2_20220803T140850_20220803T142350_C001 and Backscatter Quality, OCOG Altimeter Range and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T142552_20220803T143514_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Range and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality Flags have be Range and Backscatter Quality
CS_OFFL_SIR_NOPM_2_20220803T153033_20220803T153156_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Flag and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Range and Backscatter Quality.
CS_OFFL_SIR_NOPM_2_20220803T153742_20220803T154532_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have been so for one or more records
CS_OFFL_SIR_NOPM_2_20220803T154829_20220803T160255_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality Flags have be Range and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T182433_20220803T185121_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Range and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T185819_20220803T190243_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have been so for one or more records
CS_OFFL_SIR_NOPM_2_20220803T190725_20220803T193420_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T195817_20220803T202937_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T203730_20220803T204307_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been so for one or more records
CS_OFFL_SIR_NOPM_2_20220803T204622_20220803T205051_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T212205_20220803T212422_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T213654_20220803T220938_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be Range and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T221634_20220803T222146_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have been so for one or more records
CS_OFFL_SIR_NOPM_2_20220803T222702_20220803T224332_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records
CS_OFFL_SIR_NOPM_2_20220803T225226_20220803T225355_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have been so for one or more records

CS_OFFL_SIR_NOPM_2_20220803T230127_20220803T230156_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_20220803T231308_20220803T233737_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_20220803T233803_20220803T234826_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_20220803T235402_20220803T235634_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_20220803T235641_20220804T000052_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_20220803T031155_20220803T031408_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_20220803T040659_20220803T041144_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_20220803T054446_20220803T054452_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_20220803T081602_20220803T081626_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_20220803T040512_20220803T040519_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_20220803T133629_20220803T133732_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (20 Hz PLRM)

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20220803T004009_20220803T004148_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_20220803T012834_20220803T013011_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_20220803T024541_20220803T024646_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_20220803T040659_20220803T041144_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_20220803T043538_20220803T043552_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_20220803T044838_20220803T045232_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_20220803T050728_20220803T050831_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_20220803T050913_20220803T051247_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_20220803T051317_20220803T051329_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_20220803T053825_20220803T054056_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_20220803T061950_20220803T062427_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_20220803T071708_20220803T071840_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_20220803T072345_20220803T072351_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_20220803T072720_20220803T072852_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_20220803T083736_20220803T083931_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_20220803T085727_20220803T085840_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_20220803T090620_20220803T090735_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_20220803T104314_20220803T104622_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_20220803T115213_20220803T115306_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_20220803T122218_20220803T122744_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_20220803T131312_20220803T131646_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_20220803T143515_20220803T143819_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_20220803T145212_20220803T145323_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_20220803T151434_20220803T152036_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_20220803T152108_20220803T152711_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_20220803T152844_20220803T153033_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_20220803T153410_20220803T153741_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_20220803T161216_20220803T161605_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_20220803T181637_20220803T181759_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_20220803T185645_20220803T185818_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_20220803T190244_20220803T190531_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_20220803T195338_20220803T195735_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_20220803T203352_20220803T203729_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_20220803T211211_20220803T211408_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_20220803T213239_20220803T213414_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_20220803T221315_20220803T221634_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_20220803T222147_20220803T222312_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_20220803T224333_20220803T224646_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_20220802T235855_20220803T000342_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_20220803T005155_20220803T005802_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_20220803T024947_20220803T025200_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_20220803T030701_20220803T030757_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_20220803T031536_20220803T032103_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_20220803T033650_20220803T033904_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_20220803T034147_20220803T034326_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_20220803T040512_20220803T040519_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_20220803T044526_20220803T044803_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_20220803T045233_20220803T045752_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_20220803T045827_20220803T045929_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_20220803T063050_20220803T064045_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_20220803T072853_20220803T073116_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_20220803T082609_20220803T082717_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_20220803T085452_20220803T085726_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_20220803T090736_20220803T091149_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_20220803T095924_20220803T100253_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_20220803T100509_20220803T100845_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_20220803T103255_20220803T103639_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_20220803T104622_20220803T105006_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_20220803T121043_20220803T121724_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_20220803T130550_20220803T130648_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_20220803T135112_20220803T135652_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_20220803T144530_20220803T144817_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_20220803T144817_20220803T145212_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_20220803T160416_20220803T161112_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_20220803T185122_20220803T185351_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_20220803T204422_20220803T204621_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_20220803T205052_20220803T205441_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_NOPR_2_20220803T220938_20220803T221315_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_20220803T222312_20220803T222701_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_20220803T230157_20220803T230403_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_20220803T230513_20220803T231307_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_20220803T234826_20220803T235028_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (1 Hz & 1 Hz PLRM)

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

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

Number of products with errors:

173

5.7 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20 Hz)

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

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

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	126	126	4	120	2
SIR_NOPR1B	84	84	0	80	4
SIR_NOPN1B	97	97	0	93	4
SIR_NOPM_2	126	126	77	47	2
SIR_NOPR_2	84	84	16	64	4
SIR NOPN 2	97	97	34	59	4

7.1 QCC Errors

SIR_NOPM_2 SIR_NOPN1B SIR_NOPN_2 SIR_NOPR1B SIR_NOPR_2

Number of QCC reports with errors:

Product Type TURESIZEANDI SIR_NOPM1B 2

28

Total number of occurrences of each error							
-	-	-	-	-	-	-	
l				ı	l		

Test Description Key:		
Abbreviation	Test name	Details
STRUCTURESIZEANDR	STRUCTURE_SIZE_AND_READ	#N/A

7.2 QCC Warnings

Number of QCC reports with warnings

1501

Total numb	er of occurrences of e	each warning

Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_NOPM1B	122	0	0	0	0	0	0
SIR_NOPM_2	0	35	36	31	33	0	26
SIR_NOPN1B	97	0	0	0	0	0	0
SIR_NOPN_2	0	10	29	38	22	28	22
SIR_NOPR1B	79	0	0	0	0	0	0
SIR_NOPR_2	0	34	39	42	28	28	15

Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCD	RPEPOPFDPLRMSINNCDF	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	29	0	0	0	0	24
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	0	23	0	31	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	1	0	39	0	45	0	0

Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	3	12	0	2	33
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	25	12	16	20	14	28
SIR_NOPR1B	0	0	0	0	0	0	0
SIR NOPR 2	41	0	0	24	17	7	37

Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-
SIR_NOPM1B	0	0	0	0	0		
SIR_NOPM_2	0	1	0	0	0		
SIR_NOPN1B	0	0	0	45	0		
SIR_NOPN_2	25	11	3	0	0		
SIR_NOPR1B	0	0	0	84	6		
SIR_NOPR_2	46	1	2	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				
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only				
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAOFDPLRMNCD 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				
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample				
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter				
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter				

7.3 Missing QCC Reports