

1. Overview

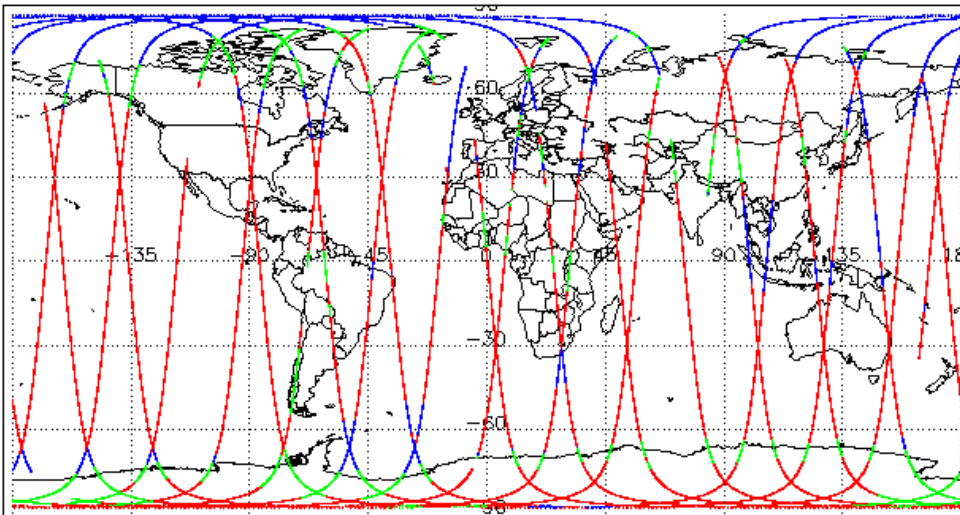
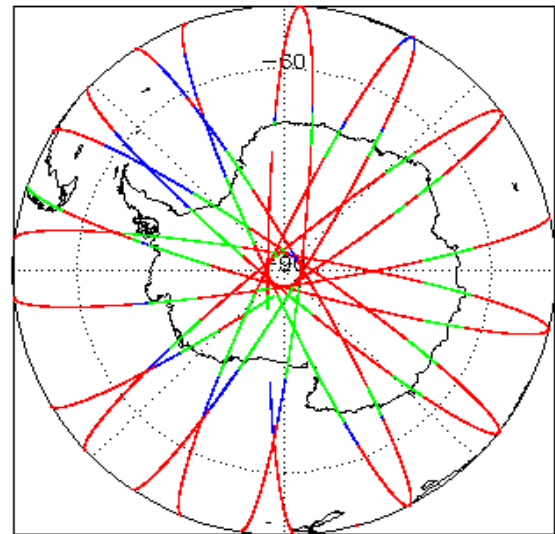
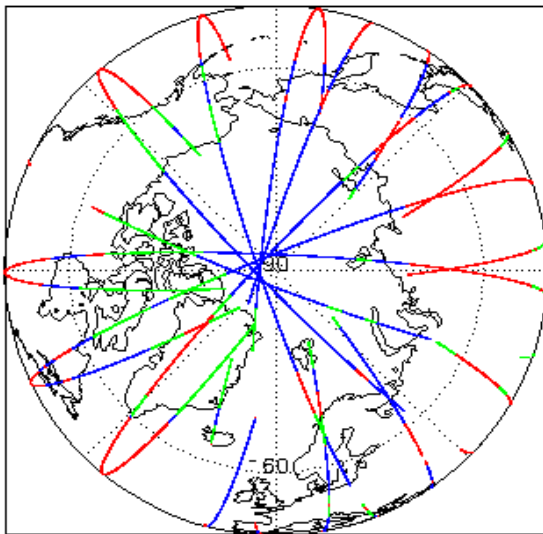
Report Production:	06-Apr-2021
Processor Used:	CryoSat Ocean Processor
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data

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-Apr-2021	None
03-Apr-2021	None
04-Apr-2021	Nothing planned

2. Global Coverage



Mode Coverage

	LRM
	SAR
	SARIn

3. Instrument Configuration

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

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

4. NOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

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 l1b_proc_flag_hr flag is currently set all L1B IOPR and IOPN products because the l1b_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 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.

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. This is being investigated and will be updated in the next SW update.

Number of products with errors: 2

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20210403T031101_20210403T032212_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20210403T090150_20210403T090622_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

4.6 L1B Waveform Group Data Check

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

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

Number of products with errors: 20

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20210403T020838_20210403T022028_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20210403T184345_20210403T191140_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20210403T194530_20210403T195405_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20210403T230553_20210403T231045_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T033055_20210403T033308_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T042605_20210403T043036_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T101431_20210403T101526_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T133210_20210403T133700_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T142534_20210403T142712_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T151116_20210403T151225_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T154253_20210403T154918_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T165033_20210403T165628_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T182524_20210403T182554_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20210403T201246_20210403T201658_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T032550_20210403T032713_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T083529_20210403T084031_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T092639_20210403T092831_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T102707_20210403T102732_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T200243_20210403T201246_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20210403T232420_20210403T233150_C001	Loss of Echo	The tracking echo is missing for one or more records

5. NOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors: 0

5.2 L2 Product Header Analysis

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

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.

Number of products with errors: 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 Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update.

> **Mean Sea Surface:** The error value is currently set for products over land and sea ice, but this is to be expected.

> **Mean Dynamic Topography:** The error value is currently set for products over land and sea ice, but this is to be expected.

> **Altimetric Wind Speed Error:** The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 46

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20210403T022232_20210403T023821_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20210403T025416_20210403T030443_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20210403T084840_20210403T085618_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_NOPM_2_20210403T144701_20210403T145413_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20210403T184345_20210403T191140_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_20210403T001050_20210403T001251_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20210403T010902_20210403T011048_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_20210403T015259_20210403T015352_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_20210403T024704_20210403T024926_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_20210403T033055_20210403T033308_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_20210403T041715_20210403T041922_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_20210403T042605_20210403T043036_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_20210403T050739_20210403T051131_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_20210403T051647_20210403T051720_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_20210403T074623_20210403T074759_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_20210403T091631_20210403T091747_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_20210403T092321_20210403T092639_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_20210403T101431_20210403T101526_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_20210403T110217_20210403T110246_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20210403T123646_20210403T123923_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_20210403T124121_20210403T124654_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_20210403T133210_20210403T133700_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_20210403T141555_20210403T141831_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_20210403T151116_20210403T151225_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_20210403T154253_20210403T154918_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_20210403T165033_20210403T165628_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_20210403T173325_20210403T173513_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_20210403T174323_20210403T174548_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_20210403T183046_20210403T183454_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_20210403T191254_20210403T191435_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_20210403T201246_20210403T201658_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20210403T205302_20210403T205633_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_20210403T223216_20210403T223537_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_20210403T224050_20210403T224214_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_20210403T232252_20210403T232420_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_20210403T001456_20210403T002204_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_20210403T015352_20210403T015934_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_20210403T033308_20210403T033959_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_20210403T051131_20210403T051647_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_20210403T083529_20210403T084031_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_20210403T084419_20210403T084616_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_20210403T182554_20210403T183046_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_20210403T200243_20210403T201246_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_20210403T214252_20210403T215139_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_20210403T232420_20210403T233150_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_20210403T233239_20210403T233426_C001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide 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: 2

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20210403T031101_20210403T032212_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_20210403T090150_20210403T090622_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20Hz)

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

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

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

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

Number of products with errors: 64

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20210403T002640_20210403T005905_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_20210403T010041_20210403T010605_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_20210403T010624_20210403T010902_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_20210403T011706_20210403T012935_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_20210403T012948_20210403T014711_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_20210403T020320_20210403T020403_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_20210403T020838_20210403T022028_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_20210403T022232_20210403T023821_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_20210403T024004_20210403T024503_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_20210403T173325_20210403T173513_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_20210403T181107_20210403T181211_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_20210403T173243_20210403T173325_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (20Hz PLRM)

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

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

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

Number of products with errors: 78

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20210403T005916_20210403T010041_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_20210403T024704_20210403T024926_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_20210403T030443_20210403T030549_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_20210403T030900_20210403T031000_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_20210403T032713_20210403T033008_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_20210403T033055_20210403T033308_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_20210403T042605_20210403T043036_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_20210403T050739_20210403T051131_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_20210403T052626_20210403T052740_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_20210403T052836_20210403T053156_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_20210403T070547_20210403T070626_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_20210403T074623_20210403T074759_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_20210403T082625_20210403T082730_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_20210403T083504_20210403T083529_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_20210403T091631_20210403T091747_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_20210403T092321_20210403T092639_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_20210403T124121_20210403T124654_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_20210403T132615_20210403T132643_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_20210403T141555_20210403T141831_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_20210403T142032_20210403T142137_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

SIR_NOPM_2	29	0	0	4	34	0	6
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	0	22	21	33	48	29
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	0	45	0	1	52	27	10

Product Type	RSWHOEPFNCDF	RSWHOEPFPLRMNCDF	RSWHOEPNCDF	SOOHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_NOPM1B	0	0	0	0	0	0	
SIR_NOPM_2	35	0	5	0	0	0	
SIR_NOPN1B	0	0	0	0	42	0	
SIR_NOPN_2	24	23	12	2	0	0	
SIR_NOPR1B	0	0	0	0	89	6	
SIR_NOPR_2	31	43	0	7	0	0	

Test Description Key:

Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)
MVIOEPFNCDF	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
RBSZOPEPFNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPEPFPLRMNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPEPNCDF	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
RPEPOPFPLRMSARNCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFPLRMSINNCDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOLRMNCDF	RangePeakinessExcludingPolarOLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNNetCDF	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
RSSHAOFNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFPLRMNCDF	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
RSWHOEPFNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFPLRMNCDF	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
SOOHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

7.3 Missing QCC Reports

Number of products with missing QCC reports: 0