

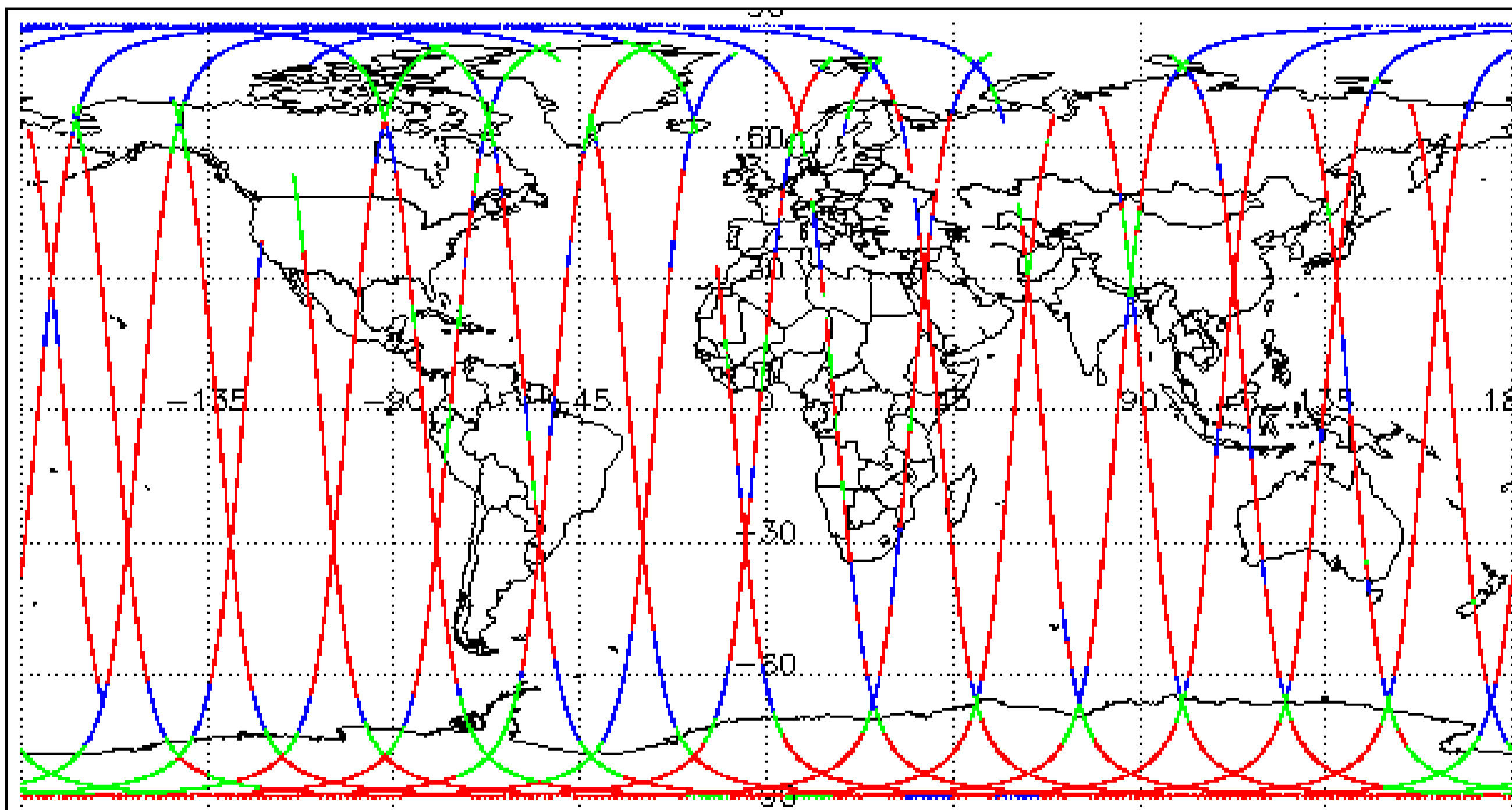
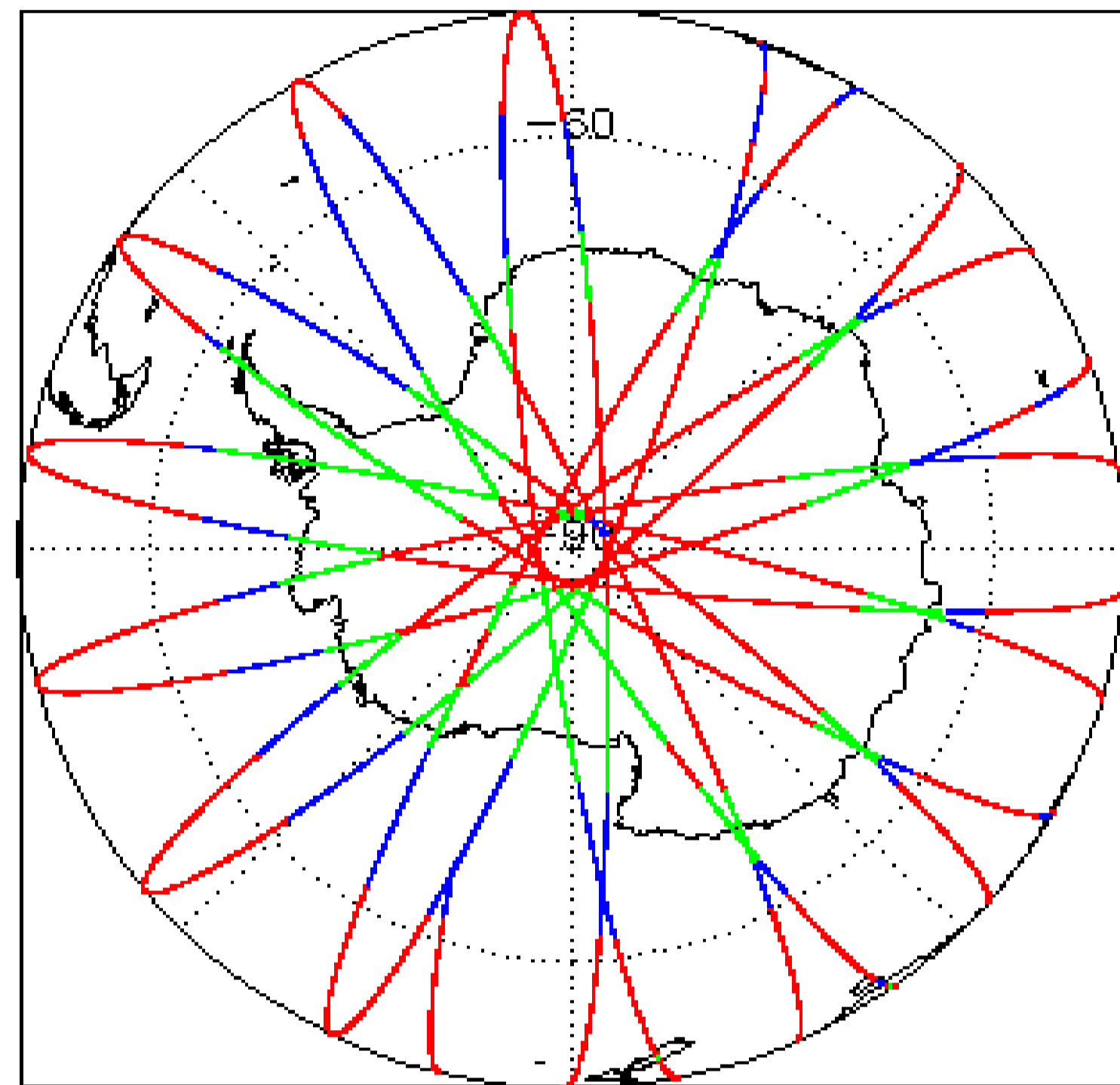
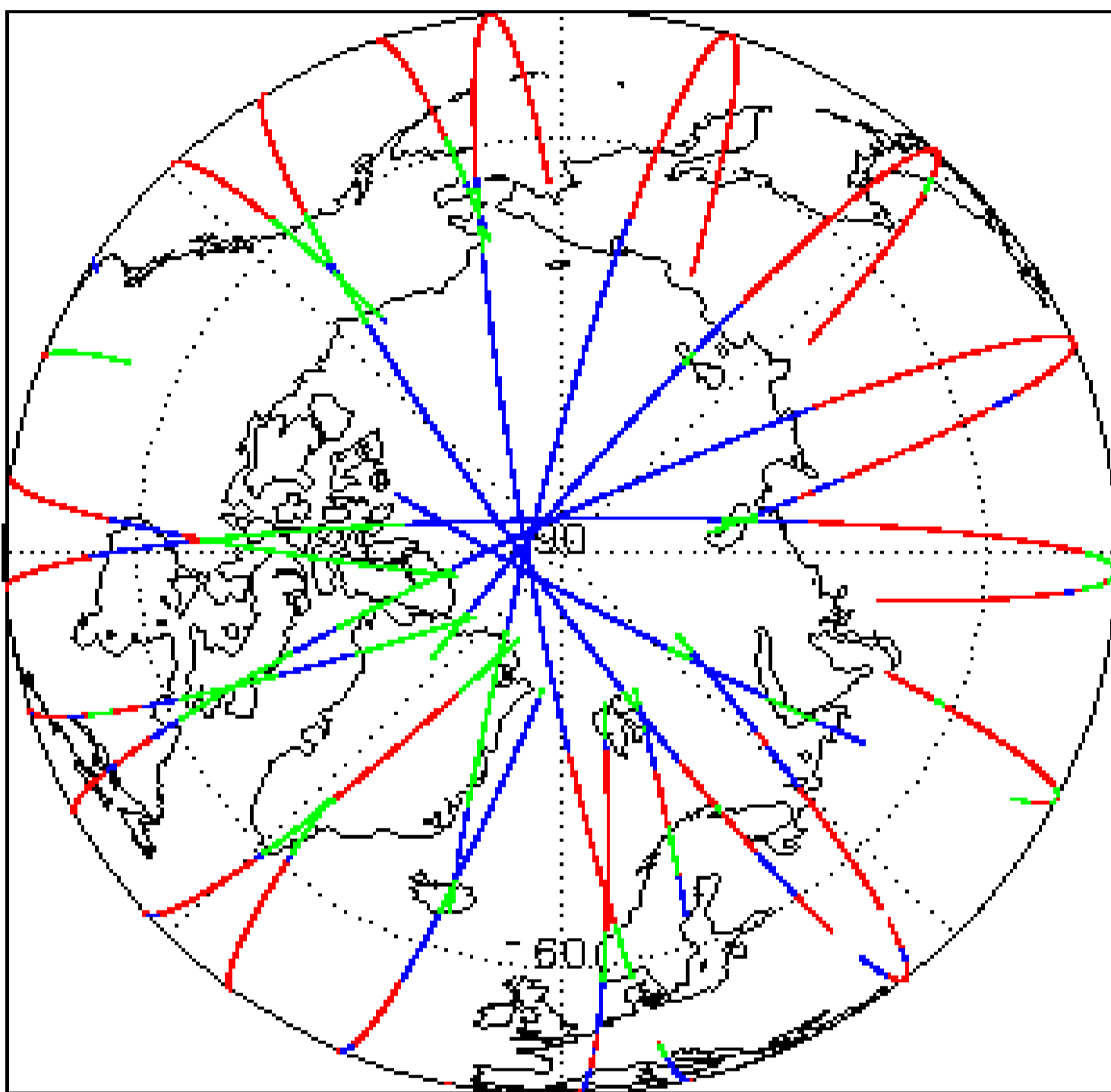
1. Overview

Report Production:	29-Jun-2020
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
Measurement Quality Flag Check	See Section 5.6
Ocean Retracking Quality Check	See Section 5.7
QCC Error/ Warning Check	See Section 6.2

Mission / Instrument News	
25-Jun-2020	None
26-Jun-2020	None
27-Jun-2020	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: 0

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: 12

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20200626T014558_20200626T021705_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20200626T205016_20200626T211551_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T040324_20200626T040444_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T040801_20200626T041016_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T085408_20200626T085510_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T135224_20200626T135312_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T135315_20200626T135541_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20200626T171139_20200626T171353_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20200626T005639_20200626T005809_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20200626T012353_20200626T012729_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20200626T051331_20200626T051510_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20200626T102508_20200626T102713_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: 44

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20200626T204026_20200626T204151_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20200626T005049_20200626T005208_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_20200626T032733_20200626T032735_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_20200626T045650_20200626T045828_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_20200626T072200_20200626T072651_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_20200626T081401_20200626T081617_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_20200626T103547_20200626T103612_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_20200626T161856_20200626T162038_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_20200626T041016_20200626T041027_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_20200626T131326_20200626T131624_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_20200626T221822_20200626T221923_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 (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: 79

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20200626T010328_20200626T010649_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_20200626T012729_20200626T012856_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_20200626T013335_20200626T013703_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_20200626T030812_20200626T031047_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_20200626T031240_20200626T031556_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_20200626T034859_20200626T035004_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_20200626T040324_20200626T040444_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_20200626T040801_20200626T041016_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_20200626T044336_20200626T044935_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_20200626T055107_20200626T055206_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_20200626T060525_20200626T060901_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_20200626T070241_20200626T070606_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_20200626T070651_20200626T070806_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_20200626T072200_20200626T072651_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_20200626T162543_20200626T162550_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T163002_20200626T163517_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T164929_20200626T165141_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T170424_20200626T170456_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T171353_20200626T171808_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T175720_20200626T175806_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T184506_20200626T184755_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T185217_20200626T185738_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T185813_20200626T185908_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T212830_20200626T213047_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T220620_20200626T220637_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T225451_20200626T225700_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOQ Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOQ Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20200626T235901_20200627T000231_C001	OCOQ Altimeter Range Quality PLRM, OCOQ Backscatter Quality	The OCOQ Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

Number of products with errors: 196

5.7 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20Hz)

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

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

Number of products with errors: 60

L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors: 147

6. 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	137	137	5	132	0
SIR_NOPR1B	112	112	0	112	0
SIR_NOPN1B	107	107	7	100	0
SIR_NOPM_2	137	137	81	56	0
SIR_NOPR_2	112	112	39	73	0
SIR_NOPN_2	107	107	41	66	0

6.1 QCC Errors

Number of QCC reports with errors: 0

6.2 QCC Warnings

Number of QCC reports with warnings: 1688

Total number of occurrences of each warning

Product Type	BCSHNCDF	MVIOEPDNCDF	MVIOEPNDCF	MVIONCDF	RBSZOPEPFDNCDF	RBSZOPEPFDPLRMNCD	RBSZOPEPNCDF
SIR_NOPM1B	132	0	0	0	0	0	0
SIR_NOPM_2	0	39	41	1	39	0	35
SIR_NOPN1B	98	0	0	0	0	0	0
SIR_NOPN_2	0	11	32	6	24	29	19
SIR_NOPR1B	107	0	0	0	0	0	0

SIR_NOPR_2	0	36	50	2	31	25	14
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Product Type	RNELPOTONCDF	RPEOPFDLRMNCDF	RPEOPFDPLRMSARNCDF	RPEOPFDPLRMSINNCDF	RPEOPFDSARNCDF	RPEOPFDSINNCDF	RPEOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	33	0	0	0	0	26
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	1	0	0	23	0	34	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	4	0	43	0	54	0	0

Product Type	RPEOPSARNCDF	RPEOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPDNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	0	0	4	28	0	6	36
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	28	12	43	51	33	28
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	44	0	1	52	37	3	36

Product Type	RSWHOEPDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-
SIR_NOPM1B	0	0	0	0	1		
SIR_NOPM_2	0	1	0	0	0		
SIR_NOPN1B	0	0	0	45	0		
SIR_NOPN_2	28	17	1	0	0		
SIR_NOPR1B	0	0	0	112	4		
SIR_NOPR_2	46	2	0	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
MVIOEPDNCDF	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
RBSZOPEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPEPFDPLRMNCDF	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
RPEOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPFDPLRMSARNCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPFDPLRMSINNCDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEOPSINNCDF	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
RSSHAOFDPLRMNCDF	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
RSWHOEPDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPDPLRMNCDF	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

Number of products with missing QCC reports: 0