

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

<u>25/12/2020</u>

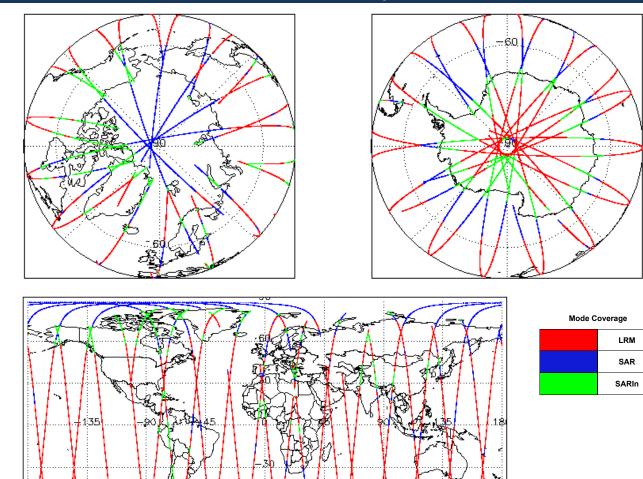
)	05 100 2021	Check	L1 & L2
Report Production:	05-Jan-2021	Server check: science-pds.cryosat.esa.int	Nominal
<u> </u>		Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal
Detalland	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal
Data Used:	L1B & L2 Science Data	Product Header Analysis	Nominal
	I	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

1. Overview

24-000-2020	None
25-Dec-2020	None
26 Dee 2020	Mathing plannad

26-Dec-2020 Nothing planne

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

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).

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4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and		
1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1 SARIn chains. A modification is required in the next release.	B IOPR and IOPN products because	e the I1b_processing_quality_hr field is not correctly configured in the OSAR and
umber of products with errors: 0		
.3 L1B Auxilary Data File Usage Check		
each product is checked for missing Data Set Descriptors with respect to a pro-	e-determined baseline and also to cl	heck the validity of Auxiliary Data Files is correct.
ynamic Atmospheric Correction: The DAC is missing in all products becau	use the auxiliary files required are no	ot available in time for processing. This known and expected behaviour.
umber of products with errors: 0		
.4 L1B Auxiliary Correction Error Check		
ryoSat L1B data includes a correction error flag for each measurement recor	d. The bit value of this flag indicates	s any problems when set.
lumber of products with errors: 0		
I.5 L1B Measurement Confidence Data Check		
ryoSat L1B data includes a measurement confidence flag for each measurer	nent record. The bit value of this flag	g indicates any problems when set.
Attitude Correction Missing: This flag is currently set in error for NOPR pr	oducts due to a configuration issue.	This is being investigated and will be updated in the next SW update.
lumber of products with errors: 1		
roduct	Test Failed	Description
S_OFFL_SIR_NOPM1B_20201225T183636_20201225T184654_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
yoSat L1B data includes a waveform data flag for each measurement recor	-	any problems when set.
yoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this	is to be expected.	any problems when set.
iryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13 roduct	is to be expected.	Description
ryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001	is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T165131_20201225T171755_C001	is to be expected. Test Failed Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record         Loss of Echo Flag: This flag is currently set for products over land, but this         lumber of products with errors:       13         Product         SS_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001         SS_OFFL_SIR_NOPM1B_20201225T165131_20201225T171755_C001         SS_OFFL_SIR_NOPN1B_20201225T033439_20201225T033603_C001	is to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T165131_20201225T073603_C001 S_OFFL_SIR_NOPN1B_20201225T0630439_20201225T065237_C001	is to be expected.           Test Failed           Loss of Echo           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13 Product SS_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 SS_OFFL_SIR_NOPM1B_20201225T165131_20201225T072742_C001 SS_OFFL_SIR_NOPM1B_20201225T033439_20201225T033603_C001 SS_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001 SS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001	is to be expected. Test Failed Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this           lumber of products with errors:         13           Product         13           S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T165131_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T033439_20201225T033603_C001           SS_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001           SS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001           SS_OFFL_SIR_NOPN1B_20201225T033803_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement recom Loss of Echo Flag: This flag is currently set for products over land, but this umber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T165131_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T033439_20201225T033603_C001 S_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001 S_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001 S_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001 S_OFFL_SIR_NOPN1B_20201225T142841_20201225T143040_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this           lumber of products with errors:         13           Product         13           S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001           CS_OFFL_SIR_NOPM1B_20201225T05131_20201225T033603_C001           CS_OFFL_SIR_NOPM1B_20201225T065045_20201225T065237_C001           CS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001           CS_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001           CS_OFFL_SIR_NOPN1B_20201225T132851_20201225T143040_C001           CS_OFFL_SIR_NOPN1B_20201225T142841_20201225T143040_C001	is to be expected.	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement record           Loss of Echo Flag: This flag is currently set for products over land, but this           Iumber of products with errors:         13           Product         13           SOFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T065131_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T065045_20201225T03603_C001           SS_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001           SS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001           SS_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001           SS_OFFL_SIR_NOPN1B_20201225T142841_20201225T134040_C001           SS_OFFL_SIR_NOPN1B_20201225T191427_20201225T191547_C001           SS_OFFL_SIR_NOPN1B_20201225T191427_20201225T200037_C001	is to be expected.  Test Failed  Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
<b>4.6 L1B Waveform Group Data Check</b> CryoSat L1B data includes a waveform data flag for each measurement recompleter of products over land, but this flag is currently set for products over land, but this flag for each measurement recompleter of products with errors:         13         Product         CS_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001         CS_OFFL_SIR_NOPM1B_20201225T065045_20201225T033603_C001         CS_OFFL_SIR_NOPM1B_20201225T065045_20201225T065237_C001         CS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001         CS_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001         CS_OFFL_SIR_NOPN1B_20201225T191427_20201225T143040_C001         CS_OFFL_SIR_NOPN1B_20201225T191427_20201225T191547_C001         CS_OFFL_SIR_NOPN1B_20201225T195457_20201225T23800_C001         CS_OFFL_SIR_NOPN1B_20201225T195457_20201225T23800_C001         CS_OFFL_SIR_NOPN1B_20201225T195457_20201225T014650_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement recom Loss of Echo Flag: This flag is currently set for products over land, but this umber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T165131_20201225T077742_C001 S_OFFL_SIR_NOPM1B_20201225T065045_20201225T033603_C001 S_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001 S_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001 S_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001 S_OFFL_SIR_NOPN1B_20201225T142841_20201225T143040_C001 S_OFFL_SIR_NOPN1B_20201225T191427_20201225T191547_C001 S_OFFL_SIR_NOPN1B_20201225T191427_20201225T203037_C001 S_OFFL_SIR_NOPN1B_20201225T19457_20201225T223800_C001 S_OFFL_SIR_NOPN1B_20201225T014314_20201225T014650_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement recom Loss of Echo Flag: This flag is currently set for products over land, but this umber of products with errors: 13 roduct S_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001 S_OFFL_SIR_NOPM1B_20201225T065131_20201225T073603_C001 S_OFFL_SIR_NOPM1B_20201225T033439_20201225T033603_C001 S_OFFL_SIR_NOPN1B_20201225T065045_20201225T065237_C001 S_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001 S_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001 S_OFFL_SIR_NOPN1B_20201225T142841_20201225T143040_C001 S_OFFL_SIR_NOPN1B_20201225T191427_20201225T143040_C001 S_OFFL_SIR_NOPN1B_20201225T191427_20201225T191547_C001 S_OFFL_SIR_NOPN1B_20201225T195457_20201225T223800_C001 S_OFFL_SIR_NOPN1B_20201225T014314_20201225T014650_C001 S_OFFL_SIR_NOPN1B_20201225T014314_20201225T014650_C001 S_OFFL_SIR_NOPN1B_20201225T02432_20201225T02511_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement recomendation of the second structure of the second structu	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records
ryoSat L1B data includes a waveform data flag for each measurement recomendation of the second structure of the second structu	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement recomposed of Echo Flag: This flag is currently set for products over land, but this further of products with errors:           13           Product           SS_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T071416_20201225T072742_C001           SS_OFFL_SIR_NOPM1B_20201225T071416_20201225T077742_C001           SS_OFFL_SIR_NOPM1B_20201225T065131_20201225T077742_C001           SS_OFFL_SIR_NOPN1B_20201225T065045_20201225T03603_C001           SS_OFFL_SIR_NOPN1B_20201225T091004_20201225T091516_C001           SS_OFFL_SIR_NOPN1B_20201225T132851_20201225T133003_C001           SS_OFFL_SIR_NOPN1B_20201225T1912851_20201225T143040_C001           SS_OFFL_SIR_NOPN1B_20201225T191427_20201225T191547_C001           SS_OFFL_SIR_NOPN1B_20201225T195457_20201225T223800_C001           SS_OFFL_SIR_NOPN1B_20201225T014314_20201225T025014650_C001           SS_OFFL_SIR_NOPN1B_20201225T02432_20201225T02501_C001           SS_OFFL_SIR_NOPN1B_20201225T02432_20201225T02501_C001           SS_OFFL_SIR_NOPN1B_20201225T02432_20201225T02501_C001           SS_OFFL_SIR_NOPN1B_20201225T02432_20201225T02501_C001           SS_OFFL_SIR_NOPR1B_20201225T133003_20201225T133328_C001	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo
ryoSat L1B data includes a waveform data flag for each measurement recomendation of the second structure of the second structu	is to be expected.           Test Failed           Loss of Echo           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo

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. 0

# 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).

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

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update.

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201225T062534_20201225T064110_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_20201225T110233_20201225T110336_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_20201225T010634_20201225T011055_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_20201225T014650_20201225T015023_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_20201225T023350_20201225T023450_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_20201225T032607_20201225T032927_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_20201225T033439_20201225T033604_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_20201225T041649_20201225T041727_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_20201225T051342_20201225T051450_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_20201225T065045_20201225T065237_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_20201225T073440_20201225T073635_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_20201225T091004_20201225T091516_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_20201225T095953_20201225T100243_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_20201225T100905_20201225T101207_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_20201225T104955_20201225T105013_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic	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_20201225T105013_20201225T105339_C001	Topography (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 Mean Dynamic Topography (solution 1) and the tidal corrections for one or more records
CS_OFFL_SIR_NOPN_2_20201225T122514_20201225T123032_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_20201225T145857_20201225T150022_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_20201225T150540_20201225T150846_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_20201225T163841_20201225T164137_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_20201225T164441_20201225T164715_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_20201225T174014_20201225T174059_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_20201225T191427_20201225T191547_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_20201225T195457_20201225T200037_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_20201225T204901_20201225T204949_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_20201225T205400_20201225T205610_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_20201225T213645_20201225T213823_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_20201225T214710_20201225T214917_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_20201225T223314_20201225T223800_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_20201225T232502_20201225T232726_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_20201225T005708_20201225T010634_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_20201225T023727_20201225T024530_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_20201225T041809_20201225T042552_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_20201225T055720_20201225T060442_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_20201225T071203_20201225T071416_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_NOPR_2_20201225T073635_20201225T074348_C001		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_20201225T091516_20201225T092231_C001	Topography (1), Total Geocentric Ocean	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

# 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: 1		
Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20201225T183636_20201225T184654_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more record

# 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.

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Number of products with errors:

CS_OFFL_SIR_NOPM_2_20201224T233857_20201225T000400_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.         CS_OFFL_SIR_NOPM_2_20201225T001112_20201225T001547_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records.         CS_OFFL_SIR_NOPM_2_20201225T001929_20201225T004645_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality set for one or more records.         CS_OFFL_SIR_NOPM_2_20201225T005506_20201225T005708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter	
CS_OFFL_SIR_NOPM_2_20201225T001929_20201225T004645_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20201225T001929_20201225T004645_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has to for one or more records.         CS_OFFL_SIR_NOPM_2_20201225T005506_20201225T005708_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has to for one or more records.	
CS_OFFL_SIR_NOPM_2_20201225T001929_20201225T004645_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags h         Altimeter Range and Backscatter Quality       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags h         CS_OFFL_SIR_NOPM_2_20201225T005506_20201225T005708_C001       and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags h	been set
CS_OFFL_SIR_NOPM_2_202012257005506_202012257005708_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags h	
CS_OFFL_SIR_NOPM_2_20201225T011055_20201225T014313_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been altimeter Range and Backscatter Quality flags have been altimeter Ra	
CS_OFFL_SIR_NOPM_2_20201225T015023_20201225T015556_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records.	been set
CS_OFFL_SIR_NOPM_2_20201225T015906_20201225T020341_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags h and the OCOG Altimeter Range and Backscatter Quality Flags h set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201225T022655_20201225T022755_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Tlags have for one or more records.	been set
CS_OFFL_SIR_NOPM_2_20201225T023450_20201225T023712_C001 Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags h Attimeter Range and Backscatter Quality Flags h Set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201225T024948_20201225T032306_C001 Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_NOPM_2_20201225T032927_20201225T033439_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Cocod Altimeter Range and Backscatter Quality Flags have for one or more records.	been set
CS_OFFL_SIR_NOPM_2_20201225T033918_20201225T035620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_NOPM_2_20201225T042800_20201225T044857_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags h Altimeter Range and Backscatter Quality Flags h Set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201225T045007_20201225T050142_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_NOPM_2_20201225T051827_20201225T054442_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags h Altimeter Range and Backscatter Quality Flags h Set for one or more records.	
CS_OFFL_SIR_NOPM_2_20201225T055332_20201225T055609_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Cocod Altimeter Range and Backscatter Quality Flags have for one or more records.	been set
CS_OFFL_SIR_NOPM_2_20201225T060754_20201225T061905_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags here and Back	
CS_OFFL_SIR_NOPM_2_20201225T062534_20201225T064110_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags here and Back	

CS_OFFL_SIR_NOPM_2_20201225T064309_20201225T064827_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_20201225T064846_20201225T065045_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_20201225T065912_20201225T071202_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_20201225T071416_20201225T072742_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_20201225T072800_20201225T073109_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_20201225T074356_20201225T074357_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_20201225T074725_20201225T074758_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_20201225T075340_20201225T080408_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_20201225T080547_20201225T081955_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_20201225T082235_20201225T082739_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_20201225T082803_20201225T082918_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_20201225T084520_20201225T084758_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20201225T085517_20201225T085755_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_20201225T085918_20201225T090556_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_20201225T093706_20201225T094021_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20201225T094216_20201225T095851_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_20201225T100243_20201225T100656_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_20201225T101330_20201225T103836_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_20201225T111347_20201225T113834_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20201225T114048_20201225T114611_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_20201225T114617_20201225T114942_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_20201225T115324_20201225T122513_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_20201225T124241_20201225T124753_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_20201225T125007_20201225T125024_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_20201225T125026_20201225T131121_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_20201225T131233_20201225T131725_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_20201225T132043_20201225T132850_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_20201225T133329_20201225T140615_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_20201225T141920_20201225T142029_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_20201225T144945_20201225T145541_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_20201225T150022_20201225T150539_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_20201225T151212_20201225T153349_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_20201225T153635_20201225T154617_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_20201225T155737_20201225T155858_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_20201225T155901_20201225T160210_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_20201225T161802_20201225T162245_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_20201225T162433_20201225T163459_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_20201225T164137_20201225T164441_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_20201225T165131_20201225T171755_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_20201225T171935_20201225T172258_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_20201225T172448_20201225T172455_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_20201225T174059_20201225T174755_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_20201225T174809_20201225T181220_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_20201225T183043_20201225T183543_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_20201225T183636_20201225T184654_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_20201225T184708_20201225T184809_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_20201225T184848_20201225T185752_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_20201225T190628_20201225T190639_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_20201225T192111_20201225T193535_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_20201225T194314_20201225T195457_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_20201225T200331_20201225T200756_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_20201225T201014_20201225T202438_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_20201225T202618_20201225T203711_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_20201225T210633_20201225T211022_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_20201225T211144_20201225T211719_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_20201225T211829_20201225T213526_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_20201225T213823_20201225T214709_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_20201225T214931_20201225T221141_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_20201225T231748_20201225T231931_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_20201225T232035_20201225T232502_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_20201225T232847_20201225T235552_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_20201225T164441_20201225T164715_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_20201225T133003_20201225T133328_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_20201225T142133_20201225T142206_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_20201225T173816_20201225T173910_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_20201225T200935_20201225T201014_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.

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20201225T000644_20201225T000825_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_20201225T000934_20201225T001112_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_20201225T010634_20201225T011055_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_20201225T014650_20201225T015023_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_20201225T024530_20201225T024712_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_20201225T032607_20201225T032927_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_20201225T033439_20201225T033604_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_20201225T035621_20201225T035938_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_20201225T064129_20201225T064309_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_20201225T073440_20201225T073635_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_20201225T082049_20201225T082235_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_20201225T084758_20201225T085331_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_20201225T091004_20201225T091516_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_20201225T100905_20201225T101207_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_20201225T110336_20201225T110459_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_20201225T110935_20201225T111347_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_20201225T113933_20201225T114047_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_20201225T122514_20201225T123032_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_20201225T132851_20201225T133003_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_20201225T140615_20201225T140746_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_20201225T140831_20201225T141004_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_20201225T142206_20201225T142328_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_20201225T142841_20201225T143040_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_20201225T145857_20201225T150022_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_20201225T155712_20201225T155730_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_20201225T161430_20201225T161802_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_20201225T173659_20201225T173816_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_20201225T182348_20201225T182620_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_20201225T185935_20201225T190127_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_20201225T195457_20201225T200037_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_20201225T200756_20201225T200935_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_20201225T205400_20201225T205610_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_20201225T205715_20201225T205905_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_20201225T210149_20201225T210311_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_20201225T221345_20201225T221652_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_20201225T221747_20201225T221920_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_20201225T223314_20201225T223800_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
	Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH	set for one or more records.
CS_OFFL_SIR_NOPN_2_20201225T232502_20201225T232726_C001	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_20201225T000401_20201225T000644_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_20201225T005352_20201225T005506_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_20201225T005708_20201225T010634_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_20201225T014314_20201225T014650_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_20201225T015712_20201225T015906_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_20201225T023016_20201225T023345_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_20201225T023727_20201225T024530_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_20201225T024713_20201225T024825_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_20201225T033604_20201225T033918_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_20201225T041809_20201225T042552_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_20201225T042556_20201225T042800_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_20201225T051451_20201225T051827_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_20201225T055720_20201225T060442_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_20201225T065238_20201225T065912_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_20201225T071203_20201225T071416_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_20201225T073635_20201225T074348_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_20201225T085453_20201225T085517_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_20201225T090557_20201225T090629_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_20201225T090752_20201225T091004_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_20201225T091516_20201225T092231_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_20201225T093614_20201225T093706_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_20201225T115101_20201225T115324_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_20201225T123835_20201225T123953_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_20201225T133003_20201225T133328_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_20201225T140747_20201225T140831_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_20201225T144701_20201225T144945_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_20201225T154617_20201225T154805_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_20201225T160211_20201225T160547_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_20201225T163459_20201225T163841_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_20201225T164818_20201225T165131_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_20201225T181220_20201225T181920_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_20201225T183012_20201225T183043_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_20201225T193536_20201225T193749_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_20201225T202439_20201225T202618_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_20201225T205610_20201225T205715_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_20201225T205945_20201225T210059_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_20201225T221309_20201225T221344_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_20201225T232726_20201225T232847_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 & 1Hz PLRM)

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

178

55

135

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

Number of products with errors:

#### 5.7 L2 Ocean Retracking Quality Check

## L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

#### 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:

# 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	189	189	6	183	0
SIR_NOPR1B	114	114	0	114	0
SIR_NOPN1B	101	101	1	100	0
SIR_NOPM_2	189	189	137	52	0
SIR_NOPR_2	114	114	40	72	2
SIR_NOPN_2	101	101	34	67	0

#### 7.1 QCC Errors

Number of QCC	C reports with er	rors:	5								
					Total number	of occurrences	of each error				
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_NOPR_2	2	2	2	2							

Test Description Key:	rest Description Key:					
Abbreviation	Test name	Details				
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7 - NetCDF				
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7				
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7 - NetCDF				
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7				

# 7.2 QCC Warnings

umber of QCC repo	rts with warnings	1717					
Product Type	BCSHNCDF	IOHHMOOR	Total num MVIOEPFDNCDF	ber of occurrences of e MVIOEPNCDF	ach warning MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN
SIR NOPM1B	183	0	0	0	0	0	0
SIR NOPM 2	0	0	37	41	1	44	0
SIR NOPN1B	97	0	0	0	0	0	0
SIR NOPN 2	0	0	11	34	8	29	29
SIR_NOPR1B	110	0	0	0	0	0	0
SIR_NOPR_2	0	2	33	50	2	15	18
Due du sé Tours	RBSZOPOEPNCDF	RPEPOPFDLRMNCDF				RPEPOPFDSINNCDF	RPEPOPLRMNCDF
Product Type		RPEPOPFDLRMNCDF	RPEPOPEDPLRMSARNC	RPEPOPEDPLRMSINNCL	RPEPOPEDSARNODE	0	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	35 0	31	0	0	0	0	24
SIR_NOPN1B	12	0	0	0	0	37	0
SIR_NOPN_2		0	0	20	0	· · · · · · · · · · · · · · · · · · ·	0
SIR_NOPR1B	0	0	50	0	54	0	0
SIR_NOPR_2	4	U	50	U	54	U	0
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
SIR NOPM1B	0	0	0	0	0	0	0
SIR NOPM 2	0	0	7	22	0	9	35
SIR NOPN1B	0	0	0	0	0	0	0
SIR NOPN 2	0	27	10	50	50	26	26
SIR NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	50	0	0	48	27	12	34
Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_NOPM1B	0	0	0	0	0	0	
SIR_NOPM_2	0	1	0	0	0	0	
SIR_NOPN1B	0	0	0	0	49	1	
SIR_NOPN_2	30	14	0	2	0	0	
SIR_NOPR1B	0	0	0	0	114	6	
SIR NOPR 2	46	1	1	8	0	0	

NVIOEPRCDF         MissingValueIntOceanExcludingPolarNetCDF         The value should not be a 'missing value' for surface type 0 only           NVIONCDF         MissingValueIntOceanNetCDF         The value should not be a 'missing value' for surface type 0 only           RBSZOPOEPFDINCDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF         The value should be between 700 and 7500 (or missing) for surface type = ocean for lat between 70 and 70 degrees.           RBSZOPOEPFDINCDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for lat between 70 and 70 degrees.           RPEOPFDINCDF         RangePeakinessExcludingPolarPOEDLRMNetCDF         The backscatter sigma zero should be between 0 and 4600 (or missing) for surface type = ocean for lat between 70 and 70 degrees.           RPEOPFDINCDF         RangePeakinessExcludingPolarOFFD2LRMNetCDF         The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for lat budge between 70 and 70 degrees.           RPEOPFDINCDF         RangePeakinessExcludingPolarOFFD2LRMNetCDF         The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.           RPEOPFDINCDF         RangePeakinessExcludingPolarOFFD2LRMNetCDF         The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.           RPEOPFDSINNCDF         RangePeakinessExcludingPolarOFFD2RARNetCDF         The Peakiness should be between 0 and	Test Description Key:							
Other         Other         The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of Hz samples - 1)           MVIDEPFDNCDF         MesingValueIntOceanExcludingPolarFDZNetCDF         The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees           MVIDEPFONCDF         MesingValueIntOceanExcludingPolarMetCDF         The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees           MVIONCDF         MesingValueIntOceanExcludingPolarMetCDF         The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 700 degrees           RBSZOPOEPFDLRNNDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarDPI2NENNetCDF         The backscatter igma Zero should be between 70 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees           RPEPOPFDLRNNDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarOPFD2PLRNNetCDF         The Packiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 0 and 15000 (or missing) for surface type = ocean for latitudes betwee - 70 and 70 degrees           RPEPOPFDERNNDR         RangePeakinessExcludingPolarOPFD2PLRNNetCDF         The Packiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between 0 and 45000 (or missing) for surface type = ocean for latitudes between 0 and 70 degrees	Abbreviation	Test name	Details					
NVIOEPEDNCDF         MissingValueInOceanExcludingPolarPD2NetCDF         The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees           NVIOEPNCDF         MissingValueInOceanExcludingPolarNetCDF         The value should not be a 'missing value' for surface type 0 only           RBSZOPOEPFDNCDF         RangeBackscatterSigmaZeroOPCeanExcludingPolarPD2PRNNetCDF         The value should not be a 'missing value' for surface type 0 only           RBSZOPOEPFDNCDF         RangeBackscatterSigmaZeroOPCeanExcludingPolarPD2PRNNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between 700 and 7500 (or missing) for surface type = ocean for latitudes between	BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter					
NVIOEPRCDF         MissingValueIntOceanExcludingPolarNetCDF         The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees.           MVIOEPCDF         MassingValueIntOceanNetCDF         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         RangeBackscatterSigmaZeroOPOceanExcludingPolarHotDF         The backscatter sigma zero should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees.           RPEPOPFDPLRMNCDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarHotCDF         The backscatter sigma zero should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.           RPEPOPFDPLRMNCDF         RangePeakinessExcludingPolarOPFD2LRMARNECDF         The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees.           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2LRMARNECDF         The Peakiness should be between 0 and 4500 (or missing) for surface type = ocean for latitudes between and 70 degrees.           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2RMNECDF         The Peakiness should be between 0 and 45000 (or missing) for surface type = ocean for latitudes between and 70 degrees.           RPEPOPFSINNCDF         RangePeak	IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)					
NVIONCOF         MissingValueIntOceanNetCDF         The value should not be a 'missing value' for surface type 0 only           RBSZOPOEPFDPLDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = coean for lat between - 700 and 70 degrees           RBSZOPOEPFDPLRM         RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = coean for lat between - 700 and 70 degrees           RPEPOPFDLRMNCDF         RangePeakinessExcludingPolar/OPFD2LRMNetCDF         The backscatter sigma zero should be between 0 and 95000 (or missing) for surface type = coean for latitudes between 0 and 70 degrees           RPEPOPFDLRMSRN         RangePeakinessExcludingPolar/OPFD2LRMSRNetCDF         The PeakinessExcludingPolar/OPFD2LRMSRNetCDF           RPEPOPFDERNNN         RangePeakinessExcludingPolar/OPFD2LRMSRNetCDF         The PeakinessExcludingPolar/OPFD2LRMSRNNetCDF           RPEPOPFDSINNCDF         RangePeakinessExcludingPolar/OPFD2SNNetCDF         The PeakinessExcludingPolar/OPFD2SNNetCDF           RPEPOPFDSINNCDF         RangePeakinessExcludingPolar/OPFD2SNNetCDF         The PeakinessExcludingPolar/OPFD2SNNetCDF           RPEPOPSINNCDF         RangeReakinessExcludingPolar/OPFRXNetCDF         The PeakinessExcludingPolar/OPFRXNetCDF           RPEPOPSINNCDF         RangeReakinessExcludingPolar/OPFRXNetCDF         The PeakinessExcluding Polar/OPFRXNetCDF           RSSB	MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
RBSZOPOEPEDNCDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarED2NetCDF         The backscatter sigma Zero should be between 700 and 7500 (or missing) for surface type = ocean for lat between 70 and 70 degrees           RBSZOPOEPEDPLIM RBSZOPOEPENCDF         RangeBackscatterSigmaZeroOPOceanExcludingPolarDED2PLRMNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for lat between 70 and 70 degrees           RPEPOPEDLRMNCDF         RangePeakinessExcludingPolarOPED2PLRMSARNECDF         The backscatter sigma zero should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between OCDF           RPEPOPEDFLRMSNR         RangePeakinessExcludingPolarOPED2PLRMSINNECDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between OCDF           RPEPOPEDFLRMSINN         RangePeakinessExcludingPolarOPED2PLRMSINNECDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes between Or and 70 degrees           RPEPOPEDSINNCDF         RangePeakinessExcludingPolarOPED2SINNECDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between Or d7 degrees           RPEPOPEDSINNCDF         RangePeakinessExcludingPolarOPED2SINNECDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between Or degrees           RPEPOPEDSINNCDF         RangePeakinessExcludingPolarOPED2SINNECDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between Or degrees	MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
Beteveen - 70 and 70 degrees           RBSZOPOEPFDPLRM           RAngeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF           The backscatter sigmaZero and 70 degrees           RBSZOPOEPRDF           RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF           PEPCOPFDLRMNCDF           RangePackinessExcludingPolarOPFD2LRMNetCDF           The backscatter sigma Zero and 70 degrees           RPEPOPFDLRMNCDF           RangePackinessExcludingPolarOPFD2LRMNetCDF           The Peakiness should be between 0 and 500 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDPLRMNNDF           RangePackinessExcludingPolarOPFD2RMSINNetCDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePackinessExcludingPolarOPFD2SRNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePackinessExcludingPolarOPFD2SRNetCDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePackinessExcludingPolarOPFD2RNNetCDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePackinessExcludingPolarOPSINNetCDF         The Pe	MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only					
INCDE         Determent         Determent           RBSZOPOEPNCDF         RangeBackscatterSigmaZeroCPCoceanExcludingPolarNetCDF         The backscatter SigmaZeroCPCoceanExcludingPolarNetCDF           RPEPOFDLRMNCDF         RangePeakinessExcludingPolarOPFD2LRMNetCDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees           RPEPOFDLRMSAR         RangePeakinessExcludingPolarOPFD2LRMSARVetCDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes betwee 70 and 70 degrees           RPEPOFFDRMSINN         RangePeakinessExcludingPolarOPFD2LRMSINVEtCDF         The Peakiness should be between 0 and 5000 (or missing) for surface type = ocean for latitudes betwee 70 and 70 degrees           RPEPOFFDSRNCDF         RangePeakinessExcludingPolarOPFD2LRMSINVECDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes betwee 70 dro 70 degrees           RPEPOFFDSRNCDF         RangePeakinessExcludingPolarOPFD2SNNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPFD2SNNetCDF         The Peakiness should be between 0 and 4600 (or missing) for surface type = ocean for latitudes between 70 dogrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSNNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 70 dogrees           RSBECONCDF <td>RBSZOPOEPFDNCDF</td> <td>RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF</td> <td>The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees</td>	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					
RBSZOPOEPNCDF         RangeBackscatterSigmaZeroCPCoeanExcludingPolarNetCDF         The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between 70 and 70 degrees           RPEPOPFDLRMSAR         RangePeakinessExcludingPolarOPFD2LRMNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDPLRMSAR         RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDPLRMSINR         RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDRINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RSEGONCDF <td></td> <td>RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF</td> <td>The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes</td>		RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes					
RPEPOPFDPLRNSAR         RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between 0 and 70 degrees           RPEPOPFDPLRMSINN         RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 0 and 70 degrees           RPEPOPFDSARNCDF         RangePeakinessExcludingPolarOPFD2SARNetCDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 40000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSARNetCDF         The Peakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RSBEOONCDF         RangePeakinessExcludingPolarOPSINNetCDF         The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean for latitudes between and 70 degrees           RSSHAOFDPLRMNCD		RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
NCDF RPEPOPFDPLRMSINN         RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF         Inter Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSARNCDF         RangePeakinessExcludingPolarOPFD2SARNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDRINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSARNetCDF         The Peakiness should be between 0 and 4000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RSEBCONCDF         RangeSeaStateBiasCorrectionOceanNetCDF         The Peakiness should be between -500mm and 0mm (or missing) for surface type = ocean for surface type	RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
REPEPOPFDPLRMSINN         RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between 0 and 70 degrees           RPEPOPFDSARNCDF         RangePeakinessExcludingPolarOPFD2SARNECDF         The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPFDSINNCDF         RangePeakinessExcludingPolarOPFD2SINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSARNCDF         RangePeakinessExcludingPolarOPSARNetCDF         The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSARNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RPEPOPSINNCDF         RangePeakinessExcludingPolarOPSARNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RSSECONCDF         RangePeakinessExcludingPolarOPSINNetCDF         The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees           RSSBCONCDF         RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF         The Peakiness should be between - 3000mm and 3000mm (or missing) for surface type = ocean           RSSHAOFDNCDF         RangeSeaSurfaceHeightAnomalyOceanExcludingPolarFD2NetCDF <td></td> <td>RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF</td> <td>The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees</td>		RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
and 70 degrees       and 70 degrees         RPEPOPFDSINNCDF       RangePeakinessExcludingPolarOPFD2SINNetCDF       The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RPEPOPLRMINCDF       RangePeakinessExcludingPolarOPLRMNetCDF       The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between and 70 degrees         RPEPOPSARNCDF       RangePeakinessExcludingPolarOPSARNetCDF       The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RPEPOPSINNCDF       RangePeakinessExcludingPolarOPSINNetCDF       The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RSSBCONCDF       RangeSeaStrateBiasCorrectionOceanNetCDF       The sea surface height anomaly should be between - 3000mm and 3000mm (or missing) for surface type = ocean         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between - 3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between 0 mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanFD2PLRMNetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean         RSWHOEPFDNCDF       RangeSignificantWaveHeightOceanExcluding	RPEPOPFDPLRMSINN	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
and 70 degrees       and 70 degrees         RPEPOPLRMNCDF       RangePeakinessExcludingPolarOPLRMNetCDF       The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between and 70 degrees         RPEPOPSARNCDF       RangePeakinessExcludingPolarOPSARNetCDF       The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RPEPOPSINNCDF       RangePeakinessExcludingPolarOPSINNetCDF       The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RSSBCONCDF       RangeSeaStateBiasCorrectionOceanNetCDF       The sea strate bias correction should be between -500mm and 0mm (or missing) for surface type = ocean         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF       The sea surface height anomaly should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarHD2NetCDF </td <td></td> <td>RangePeakinessExcludingPolarOPFD2SARNetCDF</td> <td>The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees</td>		RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
and 70 degrees         RPEPOPSARNCDF       RangePeakinessExcludingPolarOPSARNetCDF         RPEPOPSINNCDF       RangePeakinessExcludingPolarOPSINNetCDF         RRSBCONCDF       RangePeakinessExcludingPolarOPSINNetCDF         RSSBCONCDF       RangeSeaStateBiasCorrectionOceanNetCDF         RSSHAOFDPLRMNCD       RangeSeaSufaceHeightAnomalyOceanFD3NetCDF         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanNetCDF         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanNetCDF         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanNetCDF         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanNetCDF         RSWHOEPFDNCDF       RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         DF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWav	RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
and 70 degrees         RPEPOPSINNCDF       RangePeakinessExcludingPolarOPSINNetCDF       The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between and 70 degrees         RSSBCONCDF       RangeSeaStateBiasCorrectionOceanNetCDF       The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean         RSSHAOFDPLCDF       RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       RangeSeaSurfaceHeightAnomalyOceanExcludingPolarFD2NetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF       The sea surface height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNCP       RangeSignificantWaveHeightOceanExcludingPolarHD2NetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNCP       RangeSignificantWaveHeightOceanExcludingPolarNetCDF       The significant wave	RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
and 70 degrees       and 70 degrees         RSSBCONCDF       RangeSeaStateBiasCorrectionOceanNetCDF       The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean         RSSHAOFDPLCPF       RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSSHAOFDPLRMNCD       RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSWHOEPFDNCDF       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         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDNCDF       RangeSignificantWaveHeightOceanExcludingPolarNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         DF       RSWHOEPNCDF       RangeSignificantWaveHeightOceanExcludingPolarNetCDF	RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSSHAOFDNCDF       RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF       The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type ocean         RSSHAOFDPLRMNCD       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         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLCDF       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPFDPLCDF       RangeSignificantWaveHeightOceanExcludingPolarNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean         RSWHOEPNCDF       RangeSignificantWaveHeightOceanExcludingPolarNetCDF       The significant wave height should be between 0mm and 15000mm (or m	RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
Ocean         Ocean           RSSHAOFDPLRMNCD         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           RSWHOEPFDPLRMNC         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           RSWHOEPFDPLCDF         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           RSWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           RSWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           SPHRTASCNSNCDF         SPH_Rel_Time_ASC_Node_Start_v2_NetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           SOOHHIFHD         SameOrOneHigher1HzIndexFor20HzData	RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean					
F         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           RSWHOEPFDPLRMNC         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           DF         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           DF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           SWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           SPHRTASCNSNCDF         SPH_Rel_Time_ASC_Node_Start_v2_NetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean           SOOHHIFHD         SameOrOneHigher1HzIndexFor20HzData         The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample	RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
Ocean         Ocean           RSWHOEPFDNCDF         RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           RSWHOEPFDPLRMNC         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           RSWHOEPFDPLRMNC         RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           RSWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           SPHRTASCNSNCDF         SPH_Rel_Time_ASC_Node_Start_v2_NetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           SOHHIFHD         SameOrOneHigher1HzIndexFor20HzData         The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample	F							
RSWHOEPFDPLRMNC       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       Iatitudes between -70 and 70 degrees         DF       RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees         RSWHOEPNCDF       RangeSignificantWaveHeightOceanExcludingPolarNetCDF       The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees         SPHRTASCNSNCDF       SPH_Rel_Time_ASC_Node_Start_v2_NetCDF       Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)         SOOHHIFHD       SameOrOneHigher1HzIndexFor20HzData       The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample	RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF						
DF RSWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         latitudes between -70 and 70 degrees           SPHRTASCNSNCDF         SPH_Rel_Time_ASC_Node_Start_v2_NetCDF         The significant wave height should be 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								
RSWHOEPNCDF         RangeSignificantWaveHeightOceanExcludingPolarNetCDF         The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean latitudes between -70 and 70 degrees           SPHRTASCNSNCDF         SPH_Rel_Time_ASC_Node_Start_v2_NetCDF         Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)           SOOHHIFHD         SameOrOneHigher1HzIndexFor20HzData         The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample	DF							
SOOHHIFHD       SameOrOneHigher1HzIndexFor20HzData       The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample	RSWHOEPNCDF							
Sector Hence Counter Stan TODHENetCDE	SOOHHIFHD		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 Sequence CounterStepTODNetCDF The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counters and the previous sequence counters and the previous sequence counters are also be also	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