

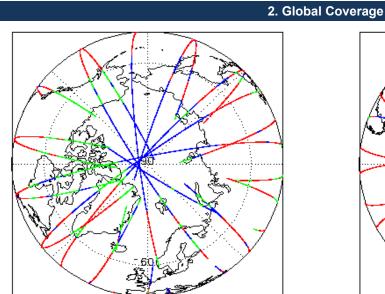
# **QA4EO Daily Report for NOP data:**

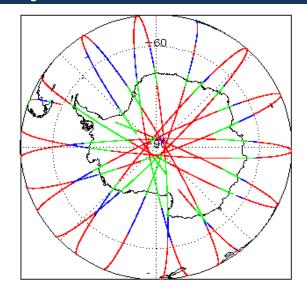
20/05/2021

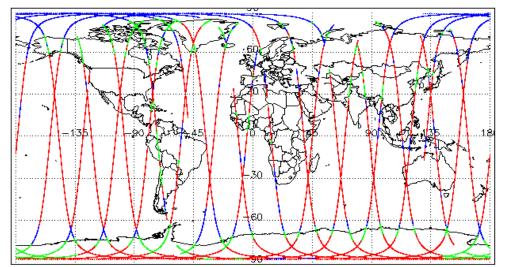
Banart Braduction	01 Mar 0001	Check	L1 & L2
Report Production:	21-May-2021	Server check: science-pds.cryosat.esa.int	Nominal
Processor Used:	CrueSet Occar Processor	Server check: calval-pds.cryosat.esa.int	Nominal
Processor Used.	CryoSat Ocean Processor	Product Software Check	Nominal
Data Used:	Near Real Time Ocean Products (NOP)	Product Format Check	Nominal
Data Useu.	L1B & L2 Science Data	Product Header Analysis	Nominal
		Auxiliary Data File Usage Check	Nominal
		Auxiliary Correction Error Check	See Section 5.4
		Measurement Confidence Data Check	See Section 4.5, 4.6
		Measurement Quality Flag Check	See Section 5.6
		Ocean Retracking Quality Check	See Section 5.7
		QCC Error/ Warning Check	See Section 7.2

1. Overview

Mission / Instrument News		
19-May-2021	None	
20-May-2021	SIRAL Unavailability due to Orbit Control Manoeuvre, on 20/05/2021 06:57:57 until 08:45:17	
21-May-2021	Nothing planned	









LRM
SAR
SARIn

# 3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.			
SIRAL instrument(s) in use: SIRAL - A			
Star Tracker(s) in use: Star Tracker 1			

Star Tracker(s) in use:	Sta

# 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).

0

4.2 L1B Product Header Analysis				
For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.				
.1B Processing Quality HR: The 11b_proc_flag_hr flag is currently set all L11 DSARIn 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		
Number of products with errors: 0				
I.3 L1B Auxilary Data File Usage Check				
Each product is checked for missing Data Set Descriptors with respect to a pre	e-determined baseline and also to cl	heck the validity of Auxiliary Data Files is correct.		
Dynamic 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.		
lumber of products with errors: 0				
1.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement recor	d. The bit value of this flag indicates	s any problems when set.		
Number of products with errors: 0				
4.5 L1B Measurement Confidence Data Check				
CryoSat L1B data includes a measurement confidence flag for each measurer				
Attitude Correction Missing: This flag is currently set in error for NOPR pro	oducts due to a configuration issue.	This is being investigated and will be updated in the next SW update.		
lumber of products with errors: 0				
6 L 1B Wayoform Group Data Chaok				
No LID Waveloini Group Data Check				
4.6 L1B Waveform Group Data Check	d. The bit value of this flag indicates	s any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement record	-	s any problems when set.		
4.6 L1B Waveform Group Data Check 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 Number of products with errors: 20	-	s any problems when set.		
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: 20	is to be expected.			
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: 20 Product	-	s any problems when set.           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 Number of products with errors: 20 Product CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001	is to be expected.	Description		
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: 20 Product CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001 CS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_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: 20 Product CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001 CS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001 CS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_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 <b>Number of products with errors:</b> 20 Product CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001 CS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001 CS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_C001 CS_OFFL_SIR_NOPM1B_20210520T001708_20210520T001941_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           Number of products with errors:         20           Product         20           CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001         20           CS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001         20           CS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_C001         20           CS_OFFL_SIR_NOPM1B_20210520T001708_20210520T001941_C001         20           CS_OFFL_SIR_NOPN1B_20210520T012554_20210520T012922_C001         20	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:         20           Product         20           S_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001           SS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001           SS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_C001           SS_OFFL_SIR_NOPM1B_20210520T001708_20210520T001941_C001           SS_OFFL_SIR_NOPN1B_20210520T012554_20210520T012922_C001           SS_OFFL_SIR_NOPN1B_20210520T012554_20210520T012922_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		
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           Jumber of products with errors:         20           Product         20           S_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001         20           CS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001         20           CS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_C001         20           CS_OFFL_SIR_NOPM1B_20210520T001708_20210520T01941_C001         20           CS_OFFL_SIR_NOPN1B_20210520T012554_20210520T012922_C001         20           CS_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         20           CS_OFFL_SIR_NOPN1B_20210520T184002_20210520T184115_C001         20	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           Jumber of products with errors:         20           Product         20           S_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001         25           S_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001         25           S_OFFL_SIR_NOPM1B_20210520T001708_20210520T001941_C001         25           S_OFFL_SIR_NOPN1B_20210520T012554_20210520T019222_C001         25           S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         25           S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         25           S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         25           S_OFFL_SIR_NOPN1B_20210520T184002_20210520T184115_C001         25           S_OFFL_SIR_NOPN1B_20210520T205625_20210520T21041_C001         25	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		
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StryoSat 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:         20           roduct         20           roduct         20           S_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001           SS_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001           SS_OFFL_SIR_NOPM1B_20210520T203252_20210520T205420_C001           SS_OFFL_SIR_NOPM1B_20210520T01708_20210520T01941_C001           SS_OFFL_SIR_NOPN1B_20210520T012554_20210520T015824_C001           SS_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001           SS_OFFL_SIR_NOPN1B_20210520T184002_20210520T015824_C001           SS_OFFL_SIR_NOPN1B_20210520T205625_20210520T210411_C001           SS_OFFL_SIR_NOPN1B_20210520T214554_20210520T214758_C001           SS_OFFL_SIR_NOPN1B_20210520T015340_20210520T015358_C001           SS_OFFL_SIR_NOPN1B_20210520T015340_20210520T015358_C001           SS_OFFL_SIR_NOPR1B_20210520T091340_20210520T092141_C001           SS_OFFL_SIR_NOPR1B_20210520T091340_20210520T092141_C001           SS_OFFL_SIR_NOPR1B_20210520T093118_20210520T093439_C001	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 record           Loss of Echo Flag: This flag is currently set for products over land, but this           umber of products with errors:         20           roduct         20           S_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001         S_OFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001           S_OFFL_SIR_NOPM1B_20210520T013252_20210520T205420_C001         S_OFFL_SIR_NOPM1B_20210520T001708_20210520T001941_C001           S_OFFL_SIR_NOPN1B_20210520T012554_20210520T012922_C001         S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001           S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001           S_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         S_OFFL_SIR_NOPN1B_20210520T215625_20210520T16824_C001           S_OFFL_SIR_NOPN1B_20210520T214554_20210520T210041_C001         S_OFFL_SIR_NOPN1B_20210520T015340_20210520T015358_C001           S_OFFL_SIR_NOPN1B_20210520T015340_20210520T0155358_C001         S_OFFL_SIR_NOPR1B_20210520T01850_20210520T092141_C001           S_OFFL_SIR_NOPR1B_20210520T01850_20210520T092141_C001         S_OFFL_SIR_NOPR1B_20210520T093118_20210520T093439_C001           S_OFFL_SIR_NOPR1B_20210520T164703_20210520T164831_C001         S_OFFL_SIR_NOPR1B_20210520T164703_20210520T164831_C001	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           Number of products with errors:         20           Product         20           CS_OFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001           CS_OFFL_SIR_NOPN1B_20210520T01708_2010520T015202_C001           CS_OFFL_SIR_NOPN1B_20210520T015358_20210520T01524_C001           CS_OFFL_SIR_NOPN1B_20210520T015358_20210520T0152015201520152015201520152015201520152	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		
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           Aumber of products with errors:         20           Product         20           Product         20           SoFFL_SIR_NOPM1B_20210520T013830_20210520T014100_C001         25           SoFFL_SIR_NOPM1B_20210520T181620_20210520T181706_C001         25           SS_OFFL_SIR_NOPM1B_20210520T01203252_20210520T205420_C001         25           SS_OFFL_SIR_NOPM1B_20210520T012554_20210520T01941_C001         25           SOFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         25           SS_OFFL_SIR_NOPN1B_20210520T015358_20210520T015824_C001         25           SS_OFFL_SIR_NOPN1B_20210520T184002_20210520T015824_C001         25           SS_OFFL_SIR_NOPN1B_20210520T205625_20210520T184115_C001         25           SS_OFFL_SIR_NOPN1B_20210520T015340_20210520T015358_C001         25           SS_OFFL_SIR_NOPN1B_20210520T015340_20210520T015358_C001         25           SS_OFFL_SIR_NOPR1B_20210520T015340_20210520T015358_C001         25           SS_OFFL_SIR_NOPR1B_20210520T093118_20210520T092141_C001         25           SS_OFFL_SIR_NOPR1B_20210520T093118_20210520T093439_C001         25           SS_OFFL_SIR_NOPR1B_20210520T093118_20210520T164831_C001         25           SS_OFFL_SIR_NOPR1B	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		
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	Test Failed       Loss of Echo       Loss of E	Description           The tracking echo is missing for one or more records           The tracking echo		

## 5. NOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

#### 5.1 L2 Product Format Check

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

Number of products with errors:

## 5.2 L2 Product Header Analysis

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

Loss of Echo

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.

CS\_OFFL\_SIR\_NOPR1B\_20210520T232854\_20210520T233435\_C001

Number of products with errors:

## 5.4 L2 Auxiliary Correction Error Check

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

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

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

35

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T123755_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_20210520T181823_20210520T181935_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_20210520T001708_20210520T001941_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T011221_20210520T011355_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T015358_20210520T015824_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_20210520T024254_20210520T024538_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T033259_20210520T033647_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T050810_20210520T051340_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20210520T092141_20210520T092425_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T092743_20210520T093118_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T110222_20210520T110435_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T115732_20210520T115853_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T123755_20210520T124341_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T133202_20210520T133257_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_20210520T133704_20210520T133914_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T134024_20210520T134253_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20210520T141947_20210520T142127_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_20210520T143011_20210520T143220_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T151618_20210520T152104_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T173859_20210520T174253_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	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and the tidal corrections for one or more record
CS_OFFL_SIR_NOPN_2_20210520T191848_20210520T192200_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T200325_20210520T200443_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_20210520T205625_20210520T210041_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T210617_20210520T210742_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20210520T224402_20210520T224548_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_20210520T232801_20210520T232854_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210520T001942_20210520T002654_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210520T015824_20210520T020538_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_NOPR_2_20210520T065314_20210520T065757_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210520T165117_20210520T165647_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20210520T181936_20210520T182118_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_20210520T183028_20210520T183819_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_20210520T200845_20210520T202125_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_20210520T214958_20210520T215747_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_20210520T232854_20210520T233435_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

## 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:
0

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# 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.

89

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20210519T235722_20210520T001108_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_20210520T001151_20210520T001414_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_20210520T003643_20210520T004613_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_20210520T004848_20210520T010301_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_20210520T010536_20210520T011041_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_20210520T011048_20210520T011059_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_20210520T011105_20210520T011220_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_20210520T012922_20210520T013051_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_20210520T013830_20210520T014100_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_20210520T014224_20210520T014932_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_20210520T022214_20210520T022323_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_20210520T022534_20210520T024151_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_20210520T024538_20210520T024958_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_20210520T025636_20210520T032037_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_20210520T035637_20210520T042140_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_20210520T042351_20210520T042913_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_20210520T043615_20210520T050322_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_20210520T050448_20210520T050809_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.

0, PHL_BR_NOPU_2.20100307001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.20100307001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.20100307001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.2010037001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.2010037001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.2010037001010_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.2010037001000_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.20100370000_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.20100370000_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.201003700000_0001     Details Allevandu Court     Details Allevandu Court       0, PHL_BR_NOPU_2.201003700000_00001     Details Allevandu Court     Details Allev	CS_OFFL_SIR_NOPM_2_20210520T053327_20210520T054040_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.
Close Control         Descense         processes           Close Allower Control         Descense         Descense<	CS_OFFL_SIR_NOPM_2_20210520T054042_20210520T060126_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
<ul> <li>DE, DHL, SR, NOPM, Z. 2010021101512, 20210001100162, C001</li> <li>DE, DHL, SR, NOPM, Z. 2010021101512, 20210001100016, C001</li> <li>DE, SH, SR, NOPM, Z. 2010021101514, 20210001100160, C001</li> <li>DE, SH, SR, NOPM, Z. 2010021101514, 20210001100150, C001</li> <li>DE, SH, SR, NOPM, Z. 20100211100154, 20210001100150, C001</li> <li>DE, SH, SR, NOPM, Z. 2010021101514, 20210001100150, C001</li> <li>DE, SH, SR, NOPM, Z. 20100211100164, 2021000110010, C001</li> <li>De, SH, SR, SR, SR, SR, SR, SR, SR, SR, SR, SR</li></ul>	CS_OFFL_SIR_NOPM_2_20210520T060343_20210520T061152_C001		
CB_OFF_UB_NOPU_2_201033T100105_201030T106105_001 ext Description ext Descripti	CS_OFFL_SIR_NOPM_2_20210520T061535_20210520T064927_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CH_DFL_SRLNOFM_2_322100007104281_20210007111080_0001     and the DOCA Althouse Range and Becksonian Quality Fings New Series Network Range and Becksonian Quality Fings New Series Network Range and Sectoscan Quality Fings New Series Network Range Range Sectoscan Quality F	CS_OFFL_SIR_NOPM_2_20210520T090103_20210520T090546_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB. OFTL. SIR. NOFM 2. 202103217133438.2021052071035345.2021     mid Backader Quality, COCG Attivited Regins and Reschader Quality, COCG Attivited Regins 2844, With Security and Security Quality Quality Quality Quality Quality Quality COCG Attivited Regins 2844, With and Security Quality Quality Quality Quality Quality Quality Quality COCG Attivited Regins 2844, With and Security Regins and Security County Quality Quality Regins and Security Quality Qual	CS_OFFL_SIR_NOPM_2_20210520T090734_20210520T091849_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CBL_DFFL_SRI_NOPAL2_2021032071302846_202103207110182_0021         Immit Beakscatter Quality, COCG         Jam 200         Jam 200 <td< td=""><td>CS_OFFL_SIR_NOPM_2_20210520T093439_20210520T093936_C001</td><td>and Backscatter Quality, OCOG</td><td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td></td<>	CS_OFFL_SIR_NOPM_2_20210520T093439_20210520T093936_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SR_NOPM_2_2021050110040_30210501100502_001 med Babacatte Cuality, ROBA med Babacatter Cuality, ROBA med Babaca	CS_OFFL_SIR_NOPM_2_20210520T093946_20210520T100152_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB, OFFL_SIR, NOPM_2, 20210520110310, 2001     and Bedescatter Quality, COOd Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 20210520110312, 20210520110321, 2001     code Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 20210520110312, 20210520110321, 2001     code Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 20210520110312, 20210520111059, 2001     code Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 20210520111059, 20210520111059, 2001     code Admeter Regis SIAS, SMH and Bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been and bedescatter Quality, COCO Admeter Regis and Bedescatter Quality, Flags have been Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 202105201113158_202105201113118_C001     Code Admeter Regis and Bedescatter Quality Regis have been at addiscatter Quality, COCO Admeter Regis and Bedescatter Quality       CB, OFFL_SIR, NOPM_2, 202105201113019_20210520111408_C001     COCO	CS_OFFL_SIR_NOPM_2_20210520T100241_20210520T100552_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_DFFL_SIR_NOPM_2_20210520T105127_20210520T10659_021001       and Backszatter Quality, CCOB       and the CCOB Altimeter Range and Backszatter Quality Flags have been set         CS_OFFL_SIR_NOPM_2_20210520T110459_20210520T110459_02101       OCCM Altimeter Range Quality, CCOB       The OCCM Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T1112008_20210520T111050_0201       OCCM Altimeter Range, SSHA, SWH       The OCCM Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T1112008_20210520T1112008_20210520T111315_CODI       Ocean Altimeter Range, SSHA, SWH       The OCCM Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T113008_20210520T113115_CODI       Ocean Altimeter Range, SSHA, SWH       The OCCM Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T113008_20210520T113115_CODI       Ocean Altimeter Range, SSHA, SWH, and Backscatter Quality Flags         CS_OFFL_SIR_NOPM_2_20210520T113008_20210520T113115_CODI       Ocean Altimeter Range, SSHA, SWH, and Backscatter Quality Flags         CS_OFFL_SIR_NOPM_2_20210520T113008_20210520T113115_CODI       Ocean Altimeter Range and Backscatter Quality       The OCCM Altimeter Range and Backscatter Quality         CS_OFFL_SIR_NOPM_2_20210520T113008_20210520T113008_20210520T113008_20210520T113008_20210520T114098_CODI       OCCCM Altimeter Range Quality, OCCG       The OCCM Altimeter Range and Backscatter Quality Flags have been set         CS_OFFL_SIR_NOPM_2_20210520T114098_CODI       OCCG Altimeter Range Quality, OCCG       The OCCM Altimeter Range and Backscatter Quality Flags have been set	CS_OFFL_SIR_NOPM_2_20210520T102405_20210520T103105_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Carpert Ser, NORM 2, 202105201110362 (2020)         Backscatter Quality         Error om more records.           CS_OFFL_SIR_NORM 2, 202105201111353 (202105201111914_C001)         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201111208_202105201111253_0001         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201113000_202105201113155_C001         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201113000_20210520111315_C001         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201113000_202105201114139_C001         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for and or more records.           CS_OFFL_SIR_NORM 2, 202105201113000_202105201114139_C001         Coen Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201114006_20210520111409_C001         Coen Altimeter Range Quality, COCG         The COEn Altimeter Range and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201116011_202105201115045_C001         COCG Altimeter Range Quality, COCG         The COEn Altimeter Range and Backscatter Quality Flags have been at for one or more records.           CS_OFFL_SIR_NORM 2, 202105201116015_20210520112005_C0011         COCG Altimeter Range S	CS_OFFL_SIR_NOPM_2_20210520T103127_20210520T105521_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T111335_20210520T111315_C001       and Backscatter Quality COCG Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range and Backscatter Quality Flags have been Allmeter Range and Backscatter Quality Flags have been Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been Allmeter Range SSHA, SWH and Backscatter Quality Flags have been Allmeter Range and Backscatter Quality Flags have been at the neo or more records.         CS_OFFL_SIR_NOPM_2_20210520T114005_20210520T114005_20210520T114005_20210520T114005_20210520T114005_20210520T114005_20210520T114005_20210520T112005_2001       OCOG Allmeter Range Quality.OCOG Backscatter Quality Flags have been at backscatter Quality Flags have been at advackatter Quality.OCOG Backscatter Quality Flags have been at advackatter Quality.OCOG Allmeter Range and Backscatter Quality Flags have been at advackatter Quality.OCOG Backscatter Quality Flags have been at advackatter Quality.OCOG Allmeter Range and Backscatter Quality.Flags have been at advackscatter Quality.OCOG Allmeter Range and Back	CS_OFFL_SIR_NOPM_2_20210520T110456_20210520T110650_C001		
CS_OFFL_SIR_NOPM_2_20210520T112006_20210520T112823_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have been Altimeter Range. SSHA, SWH and Backscatter Quality, CCOG Altimeter Range. SSHA, SWH and Backscatter Quality, CCOG Altimeter Range. SSHA, SWH and Backscatter Quality, CCOG Altimeter Range. SSHA, SWH and Backscatter Quality, Flags have been Altimeter Range and Backscatter Quality, Flags have been altimeter Range Quality, CCOG Altimeter Range Quality, CCOG Altimeter Range and Backscatter Quality, Flags have been altimeter Range Quality, CCOG Altimeter Range and Backscatter Quality Flags have been altimeter Range Quality, CCOG Altimeter Range Quality, CCOG Backscatter Quality, Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T114095_20210520T114096_C001       CCOG Altimeter Range Quality, CCOG Backscatter Quality       The OCCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115012_0210520T1120305_C001       CCOG Altimeter Range Quality, CCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_02210520T121802_C001       CCoG Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality, Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T122615_0210520T122655_C0011       CCoG Altimeter Range, SSHA, SWH and Backscatter Quality, CCOG Altimeter Range and Backscatter Quali	CS_OFFL_SIR_NOPM_2_20210520T111353_20210520T111914_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T113066_20210520T113115_C001       and Backscatter Quality, OCOG       mail the OCOG Allimeter Range and Backscatter Quality Flags have been Allimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T113390_20210520T1141390_20210520T1141390_20210520T1141390_20210520T114908_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_NOPM_2_20210520T114905_20210520T114908_C001       OCCG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001       OCCG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001       OCCG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115045_C001       OCCG Altimeter Range, SHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T120305_C001       OCCGA Altimeter Range, SHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121602_O001       OCCGA Altimeter Range, SHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T124606_C001       OCCGA Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or m	CS_OFFL_SIR_NOPM_2_20210520T112008_20210520T112823_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T113359_20210520T114199_C001       and Backscatter Quality. OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T114005_20210520T114098_C001       Backscatter Quality. OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001       Backscatter Quality. OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001       Backscatter Quality. OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115035_C001       Backscatter Quality. OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T1120426_20210520T1121802_C001       Cocan Altimeter Range. SSHA. SWH and Backscatter Quality. OCOG Altimeter Range. SSHA, SWH and Backscatter Quality. OCOG Altimeter Range. SSHA, SWH and Backscatter Quality. OCOG Altimeter Range. SSHA, SWH and Backscatter Quality. Flags have been act for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T122615_2021123755_C001       Ocean Altimeter Range. SSHA, SWH and Backscatter Quality. Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124541_20210520T124666_C001       OCOG Altimeter Range Quality. OCOG Backscatter Quality. Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_	CS_OFFL_SIR_NOPM_2_20210520T113006_20210520T113115_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_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_20210520T115653_20210520T120305_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_20210520T120426_20210520T121802_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, COOG Altimeter Range and Backscatter Quality, COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T123755_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T122605_C00112	CS_OFFL_SIR_NOPM_2_20210520T113359_20210520T114139_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T112635_20210520T120305_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001       Docean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001       Docean Altimeter Range, SSHA, SWH and Backscatter Quality       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T122615_20210520T123755_C001       Ocean Altimeter Range and Backscatter Quality       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124341_20210520T124606_C001       OCean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.       The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T124606_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T125059_C001       Docean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been altimeter Range and Backscatter Quality Flags have been altimeter	CS_OFFL_SIR_NOPM_2_20210520T114905_20210520T114908_C001		
CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have been and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124341_20210520T124606_C001       OCOG Altimeter Range Quality, OCOG Backscatter 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_20210520T124635_20210520T125059_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_20210520T125352_20210520T125950_C001       OCean Altimeter Range, SSHA, SWH Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T130743_C001       Ocean Altimeter Range, SSHA,	CS_OFFL_SIR_NOPM_2_20210520T115011_20210520T115045_C001		
CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001       and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T123755_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124341_20210520T124606_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCean Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T125059_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality       The OCCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T125059_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125325_20210520T125950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The Ocean Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T125950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210520T115853_20210520T120305_C001		
CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T123755_C001and Backscatter Quality, OCOG Altimeter Range and Backscatter Qualityand the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.CS_OFFL_SIR_NOPM_2_20210520T124341_20210520T124606_C001OCOG Altimeter Range Quality, OCOG Backscatter QualityThe OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T124635_20210520T125059_C001OCOG Altimeter Range Quality, OCOG Backscatter QualityThe OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.CS_OFFL_SIR_NOPM_2_20210520T125325_20210520T125950_C001Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have beenCS_OFFL_SIR_NOPM_2_20210520T130923_20210520T130923_20210520T132419_C001Ocean Altimeter Range, SSHA, SWH and Backs	CS_OFFL_SIR_NOPM_2_20210520T120426_20210520T121802_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T124606_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T125059_C001       OCOG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125325_20210520T125950_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T125957_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T130743_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_NOPM_2_20210520T122615_20210520T123755_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T125955_20210520T125950_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T125955_20210520T125950_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 hard backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags hard backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags hard backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags hard backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags hard backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags hard backscatter Quality, OCOG	CS_OFFL_SIR_NOPM_2_20210520T124341_20210520T124606_C001		
CS_OFFL_SIR_NOPM_2_20210520T125325_20210520T125950_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T125957_20210520T130743_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been         CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T130743_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been         cS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_NOPM_2_20210520T124635_20210520T125059_C001		
CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T130743_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have been         Sc_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Alti	CS_OFFL_SIR_NOPM_2_20210520T125325_20210520T125950_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_NOPM_2_20210520T125957_20210520T130743_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_NOPM_2_20210520T130923_20210520T132419_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_NOPM_2_20210520T135025_20210520T135325_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_20210520T135447_20210520T135934_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_20210520T140201_20210520T141823_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_20210520T142127_20210520T143011_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_20210520T143243_20210520T145455_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_20210520T152326_20210520T155716_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_20210520T160049_20210520T160234_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_20210520T160336_20210520T160805_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_20210520T161209_20210520T163743_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_20210520T170926_20210520T173620_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_20210520T174253_20210520T174844_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_20210520T175028_20210520T181118_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_20210520T181143_20210520T181615_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_20210520T184116_20210520T191512_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_20210520T192200_20210520T192716_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_20210520T193005_20210520T193159_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_20210520T193358_20210520T193643_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_20210520T195657_20210520T195740_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_20210520T200443_20210520T200844_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_20210520T202126_20210520T203006_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_20210520T203252_20210520T205420_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_20210520T210041_20210520T210202_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_20210520T210209_20210520T210617_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_20210520T210936_20210520T212125_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_20210520T212313_20210520T213031_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_20210520T213114_20210520T213548_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.

	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_NOPM_2_20210520T220118_20210520T223332_C001	and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20210520T223541_20210520T224102_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_20210520T225204_20210520T230435_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_20210520T230441_20210520T232213_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_20210520T234320_20210520T235525_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_20210520T011221_20210520T011355_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_20210520T033259_20210520T033647_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_20210520T085730_20210520T090102_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_20210520T101858_20210520T101929_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_20210520T160234_20210520T160335_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20210520T182935_20210520T182955_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20210520T214409_20210520T214457_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_20210520T232217_20210520T232343_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_20210520T012055_20210520T012232_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_20210520T012241_20210520T012316_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_20210520T015058_20210520T015312_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_20210520T024234_20210520T024254_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_20210520T165117_20210520T165647_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_20210520T182608_20210520T182657_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

## L2 Quality Flags (20Hz PLRM)

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

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

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

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Number of products with errors:

Product	Test Failed	Description
	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
	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_20210520T014101_20210520T014223_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_20210520T021451_20210520T021753_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_20210520T025202_20210520T025508_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_20210520T034641_20210520T034806_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_20210520T035238_20210520T035637_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_20210520T043245_20210520T043403_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_20210520T052401_20210520T052427_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_20210520T060219_20210520T060342_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_20210520T064927_20210520T065101_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_20210520T065140_20210520T065313_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_20210520T092743_20210520T093118_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_20210520T101858_20210520T101929_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_20210520T110222_20210520T110435_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_20210520T111130_20210520T111315_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_20210520T114247_20210520T114430_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_20210520T122509_20210520T122615_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_20210520T133202_20210520T133257_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_20210520T133704_20210520T133914_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_20210520T134024_20210520T134253_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_20210520T150056_20210520T150225_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_20210520T150550_20210520T150607_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_20210520T151618_20210520T152104_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_20210520T160234_20210520T160335_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_20210520T164049_20210520T164154_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_20210520T165103_20210520T165117_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_20210520T182445_20210520T182608_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_20210520T183001_20210520T183027_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20210520T205625_20210520T210041_C001	PLRM 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_20210520T214409_20210520T214457_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_20210520T232801_20210520T232854_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_20210520T001414_20210520T001708_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_20210520T001942_20210520T002654_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_20210520T004614_20210520T004632_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_20210520T015058_20210520T015312_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_20210520T015824_20210520T020538_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_20210520T042140_20210520T042236_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_20210520T043403_20210520T043615_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_20210520T052139_20210520T052253_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_20210520T052347_20210520T052401_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_20210520T052427_20210520T052548_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_20210520T065101_20210520T065139_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_20210520T065314_20210520T065757_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_20210520T085122_20210520T085231_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_20210520T091850_20210520T092141_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_20210520T093118_20210520T093439_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_20210520T100748_20210520T100914_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_20210520T105522_20210520T110221_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_20210520T120418_20210520T120426_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_20210520T121802_20210520T122210_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_20210520T133915_20210520T134024_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_20210520T141824_20210520T141947_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_20210520T145456_20210520T145537_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_20210520T145615_20210520T145651_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_20210520T155717_20210520T155923_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_20210520T161027_20210520T161209_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_20210520T164703_20210520T164831_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_20210520T164901_20210520T165102_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_20210520T165117_20210520T165647_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_20210520T173621_20210520T173859_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_20210520T183028_20210520T183819_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_20210520T183918_20210520T184001_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_20210520T191512_20210520T191847_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_20210520T192826_20210520T193004_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_20210520T193643_20210520T194049_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_20210520T195741_20210520T195939_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_20210520T200845_20210520T202125_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_20210520T205420_20210520T205625_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_20210520T214958_20210520T215747_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_20210520T224548_20210520T225203_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_20210520T232854_20210520T233435_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_20210520T233524_20210520T233619_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_20210520T233856_20210520T234106_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

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

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

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> 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.

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# 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	155	155	2	153	0
SIR_NOPR1B	105	105	0	105	0
SIR_NOPN1B	95	95	4	91	0
SIR_NOPM_2	155	155	96	59	0
SIR_NOPR_2	105	105	37	68	0
SIR_NOPN_2	95	95	35	60	0

0

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## 7.1 QCC Errors

Number of QCC reports with errors:

Total number of occurrences of each error

# 7.2 QCC Warnings

Number of QCC reports with warnings

			Total num	ber of occurrences of e	ach warning		
Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_NOPM1B	153	0	0	0	0	0	0
SIR_NOPM_2	0	43	43	0	42	0	34
SIR_NOPN1B	90	0	0	0	0	0	0
SIR_NOPN_2	0	8	26	4	26	26	17
SIR_NOPR1B	104	0	0	0	0	0	0
SIR_NOPR_2	0	38	41	1	36	30	18
		÷					
Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	DRPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_NOPM1B	0	0	0	0	0	0	0
SIR_NOPM_2	1	37	0	0	0	0	27
SIR_NOPN1B	0	0	0	0	0	0	0

SIR_NOPN_2	2	0	0	21	0	26	0
SIR_NOPR1B	0	0	0	0	0	0	0
SIR_NOPR_2	6	0	48	0	54	0	0
	·						
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
eaalet . jpe	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF

SIR_NOPM_2	0	0	5	30	0	3	39
SIR_NOPN1B	0	0	0	0	0	0	0
SIR_NOPN_2	0	24	21	43	53	33	25
SIR_NOPR1B	0	0	0	0	0	0	0
SIR NOPR 2	46	0	3	62	32	8	42

1	Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
	,,	0	0	0	0	0	0	
	-	-	0	0	0	0	0	
		0	1	0	0	0	0	
	SIR_NOPN1B	0	0	0	0	43	0	
	SIR_NOPN_2	24	12	1	2	0	0	
	SIR_NOPR1B	0	0	0	0	105	9	
	SIR NOPR 2	51	0	0	3	0	0	

Fest Description Key:						
Abbreviation	Test name	Details				
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter				
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only				
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter signa zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSINN	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)				
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample				
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter				
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