

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

<u>13/07/2021</u>

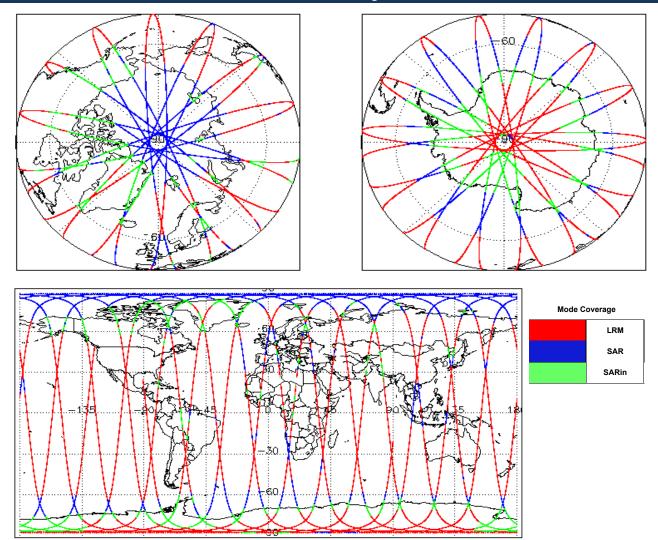
Papart Production	02 Aug 2021	Check	L1 & L2	P2P
Report Production:	03-Aug-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Useu.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Intermediate Ocean Products (IOP)	Product Format Check	Nominal	Nominal
Data Useu.	L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Warning Check	See Section 7.2	See Section 7.2

1. Overview

#### Mission / Instrument News 12-Jul-2021 None 13-Jul-2021 None

14-Jul-2021 Nothing planned

2. Global Coverage



### 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

4. IOP 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

For all products, a series of pre-defined checks are performed on the MPH a	nd SPH in order to identify any inc	consistencies and/or errors raised by the ground-segment processing chain.		
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L OSARIn chains. A modification is required in the next release.	1B IOPR and IOPN products beca	ause the I1b_processing_quality_hr field is not correctly configured in the OSAR an		
Visition chains. A modification is required in the next release.           Number of products with errors:         0				
4.3 L1B Auxilary Data File Usage Check				
Each product is checked for missing Data Set Descriptors with respect to a p	pre-determined baseline and also t	to check the validity of Auxiliary Data Files is correct.		
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement rec	ord. The bit value of this flag indic	ates 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 measure	ement record. The hit value of this	flag indicates any problems when set		
Attitude Correction Missing: This flag is currently set in error for IOPR prod Number of products with errors: 0	aucis que lo a configuration ISSUE.	. This is being investigated and will be updated in the next SW update.		
number of products with errors: 0				
A C L 4 D Mayofarma Crayon Data Chaola				
4.6 L1B Waveform Group Data Check				
4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement reco	ord. The bit value of this flag indica	ates any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement reco	-	ates any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement reco	-	ates any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement reco oss of Echo Flag: This flag is currently set for products over land, but this lumber of products with errors: 13	-	ates any problems when set.		
CryoSat L1B data includes a waveform data flag for each measurement reco	is to be expected.			
CryoSat L1B data includes a waveform data flag for each measurement reco Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001	is to be expected. Test Failed	Description		
CryoSat L1B data includes a waveform data flag for each measurement reco Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001 CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_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 reco coss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001 CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001 CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_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 reco Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product	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 reco Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001 CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001 CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001 CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001	is to be expected.           Test Failed           Loss of Echo           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           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:         13           Product         13           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         13           CS_OFFL_SIR_IOPM1B_20210713T044043_20210713T044224_C001         13           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001         13           CS_OFFL_SIR_IOPN1B_20210713T07526_20210713T075248_C001         13           CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         13           CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         13	Test Failed Loss of Echo Loss of Echo Loss of Echo 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           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 recorsonal structure           CryoSat L1B data includes a waveform data flag for each measurement recorsonal structure           CryoSat L1B data includes a waveform data flag for each measurement recorsonal structure           CryoSat L1B data includes a waveform data flag for each measurement recorsonal structure           Coss of Echo Flag: This flag is currently set for products over land, but this flag is currently set for products over land, but this flag is currently set for product structure           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001           CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001           CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001           CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001           CS_OFFL_SIR_IOPN1B_20210713T211120_20210713T211249_C001           CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001	Test Failed Loss of Echo Loss of Echo Loss of Echo Loss of Echo 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           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 records of Echo Flag: This flag is currently set for products over land, but this           Number of products with errors:         13           Product         13           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001         CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001           CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001         CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001           CS_OFFL_SIR_IOPN1B_20210713T012211120_20210713T124555_C001         CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001           CS_OFFL_SIR_IOPN1B_20210713T043057_C001         CS_OFFL_SIR_IOPR1B_20210713T091943_20210713T092504_C001	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           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 records of Echo Flag: This flag is currently set for products over land, but this           Number of products with errors:         13           Product         13           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         13           CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001         13           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T044224_C001         13           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001         13           CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001         13           CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         13           CS_OFFL_SIR_IOPN1B_20210713T1214515_20210713T124555_C001         13           CS_OFFL_SIR_IOPN1B_20210713T211120_20210713T211249_C001         14           CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001         13           CS_OFFL_SIR_IOPR1B_20210713T091943_20210713T092504_C001         13           CS_OFFL_SIR_IOPR1B_20210713T110218_20210713T110600_C001         14	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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this Number of products with errors: 13 Product CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001 CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001 CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001 CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001 CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001	is to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
CryoSat L1B data includes a waveform data flag for each measurement records           CryoSat L1B data includes a waveform data flag for each measurement records           Cross of Echo Flag: This flag is currently set for products over land, but this           Number of products with errors:         13           Product         13           SocofFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         25           COFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001         25           COFFL_SIR_IOPN1B_20210713T074744_20210713T075248_C001         25           COFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         25           COFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         25           COFFL_SIR_IOPN1B_20210713T124515_20210713T1249_C001         25           COFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001         25           COFFL_SIR_IOPR1B_20210713T091943_20210713T092504_C001         25           COFFL_SIR_IOPR1B_20210713T10218_20210713T124514_C001         25           COFFL_SIR_IOPR1B_20210713T123742_20210713T124514_C001         25           COFFL_SIR_IOPR1B_20210713T125778_2001         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           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           Number of products with errors:         13           Product         13           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         CS_OFFL_SIR_IOPN1B_20210713T044043_20210713T044224_C001           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001         CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001           CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001         CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001           CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001         CS_OFFL_SIR_IOPR1B_20210713T042828_20210713T043057_C001           CS_OFFL_SIR_IOPR1B_20210713T10218_20210713T110600_C001         CS_OFFL_SIR_IOPR1B_20210713T110218_20210713T124514_C001	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           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records		
CryoSat L1B data includes a waveform data flag for each measurement recorsos of Echo Flag: This flag is currently set for products over land, but this flag be currently set for products over land, but the currently	Test Failed         Loss of Echo         Loss of Echo	Description           The tracking echo is missing for one or more records		
CryoSat L1B data includes a waveform data flag for each measurement recors of Echo Flag: This flag is currently set for products over land, but this Number of products with errors:         13           Product         13           CS_OFFL_SIR_IOPM1B_20210713T190020_20210713T190426_C001         CS_OFFL_SIR_IOPM1B_20210713T044043_20210713T044224_C001           CS_OFFL_SIR_IOPN1B_20210713T074744_20210713T075118_C001         CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T075248_C001           CS_OFFL_SIR_IOPN1B_20210713T075206_20210713T124555_C001         CS_OFFL_SIR_IOPN1B_20210713T124515_20210713T124555_C001           CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001         CS_OFFL_SIR_IOPN1B_20210713T042828_20210713T043057_C001           CS_OFFL_SIR_IOPR1B_20210713T0142828_20210713T042054_C001         CS_OFFL_SIR_IOPR1B_20210713T10218_20210713T104505_C001           CS_OFFL_SIR_IOPR1B_20210713T10218_20210713T124514_C001         CS_OFFL_SIR_IOPR1B_20210713T123742_20210713T124514_C001           CS_OFFL_SIR_IOPR1B_20210713T215718_20210713T223116_C001         CS_OFFL_SIR_IOPR1B_20210713T223014_20210713T223116_C001           CS_OFFL_SIR_IOPR1B_20210713T223014_20210713T224401_C001         CS_OFFL_SIR_IOPR1B_20210713T223659_20210713T224401_C001	is to be expected.  Test Failed Loss of Echo	Description           The tracking echo is missing for one or more records		

#### 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors:
0

#### \_\_\_\_\_

### 5.3 L2 Auxiliary Data File Usage Check

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

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. The affected products are not reported in the table below.

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210713T011433_20210713T011534_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)
CS_OFFL_SIR_IOPM_2_20210713T025314_20210713T025824_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

		There is an error with the Total Geocentric Ocean Tide height (solution 2:
CS_OFFL_SIR_IOPM_2_20210713T054833_20210713T060016_C001	Total Geocentric Ocean Tide (FES), Non Equilibrium Long Period Ocean Tide	FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOPM_2_20210713T154438_20210713T154534_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20210713T221455_20210713T223014_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T001153_20210713T001452_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T002124_20210713T002408_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T010159_20210713T010534_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T023735_20210713T024227_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210713T025007_20210713T025043_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T025207_20210713T025314_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T041802_20210713T041927_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T051056_20210713T051221_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T051737_20210713T052042_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)
CS_OFFL_SIR_IOPN_2_20210713T065041_20210713T065349_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)
CS_OFFL_SIR_IOPN_2_20210713T065639_20210713T070021_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)
CS_OFFL_SIR_IOPN_2_20210713T083118_20210713T083352_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)
CS_OFFL_SIR_IOPN_2_20210713T092625_20210713T092743_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)
CS_OFFL_SIR_IOPN_2_20210713T100615_20210713T101232_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)
CS_OFFL_SIR_IOPN_2_20210713T110601_20210713T110809_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)
CS_OFFL_SIR_IOPN_2_20210713T114841_20210713T115016_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T124515_20210713T124555_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)
CS_OFFL_SIR_IOPN_2_20210713T133658_20210713T133929_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)
CS_OFFL_SIR_IOPN_2_20210713T150758_20210713T151149_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (ESS) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20210713T155821_20210713T155918_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T164743_20210713T165056_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)
CS_OFFL_SIR_IOPN_2_20210713T182503_20210713T182928_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)
CS_OFFL_SIR_IOPN_2_20210713T183514_20210713T183633_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)
CS_OFFL_SIR_IOPN_2_20210713T191458_20210713T191849_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 tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20210713T201245_20210713T201432_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T205653_20210713T205755_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 (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210713T210324_20210713T210414_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T215055_20210713T215321_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)
CS_OFFL_SIR_IOPN_2_20210713T223116_20210713T223356_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210713T223448_20210713T223659_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)

CS_OFFL_SIR_IOPN_2_20210713T233000_20210713T233420_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)
CS_OFFL_SIR_IOPR_2_20210713T010534_20210713T010911_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)
CS_OFFL_SIR_IOPR_2_20210713T010911_20210713T011433_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 (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPR_2_20210713T024227_20210713T025007_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)
CS_OFFL_SIR_IOPR_2_20210713T042157_20210713T042828_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)
CS_OFFL_SIR_IOPR_2_20210713T042828_20210713T043057_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)
CS_OFFL_SIR_IOPR_2_20210713T060017_20210713T060728_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)
CS_OFFL_SIR_IOPR_2_20210713T060728_20210713T060925_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)
CS_OFFL_SIR_IOPR_2_20210713T061409_20210713T061755_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210713T074145_20210713T074625_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)
CS_OFFL_SIR_IOPR_2_20210713T074625_20210713T074744_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)
CS_OFFL_SIR_IOPR_2_20210713T091943_20210713T092504_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)
CS_OFFL_SIR_IOPR_2_20210713T092504_20210713T092625_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)
CS_OFFL_SIR_IOPR_2_20210713T110218_20210713T110600_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)
CS_OFFL_SIR_IOPR_2_20210713T123726_20210713T123742_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210713T123742_20210713T124514_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)
CS_OFFL_SIR_IOPR_2_20210713T141859_20210713T142548_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)
CS_OFFL_SIR_IOPR_2_20210713T154821_20210713T154959_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210713T155918_20210713T160707_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)
CS_OFFL_SIR_IOPR_2_20210713T173851_20210713T174701_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)
CS_OFFL_SIR_IOPR_2_20210713T191849_20210713T192646_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)
CS_OFFL_SIR_IOPR_2_20210713T205755_20210713T210324_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)
CS_OFFL_SIR_IOPR_2_20210713T223659_20210713T224401_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)

1

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#### 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

# 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20Hz)

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

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210712T235007_20210713T001014_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210713T001452_20210713T001854_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_IOPM_2_20210713T002608_20210713T005048_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210713T012547_20210713T014941_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

Care, Dec., 2000, 2000, 1110, 2000, 1110, 1110, 2000, 1110, 1100, 2000         Bestandia Galery         Increases.           Cir, Dec., 2000, Onter, 2000, 11100, 2000, 1110, 2000, 1110, 2000, 1110, 2000, 1110, 2000,			
Control         Description         Exclusion Classify         Exclusion Classify           C2         OHL DR CONT_CONT_CONT_CONT_CONT_CONT_CONT_CONT_	CS_OFFL_SIR_IOPM_2_20210713T015243_20210713T015809_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
C2: 0FL SR. (0FL 2. 2010/13102627 2021/13102672 0201/13102	CS_OFFL_SIR_IOPM_2_20210713T015815_20210713T020140_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
C3: 0F-L SR LORU 2 1210/01310294, 32210/01310290, 2031       and tescander clashin, COCO       and tescander clashin, COCO       and tescander clashin, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2030/013102302, 2030/013102302, 2031/013102302, 2031/013102304, 2031       Coco Administre Range and Linkowski Clashing Clashing, COCO       The Coco Administre Range and Linkowski Clashing Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031/013102304, 2031       Coco Administre Range and Linkowski Clashing Clashing, COCO       The Coco Administre Range and Linkowski Clashing Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031/013102304, 2031       Coco Administre Range and Linkowski Clashing Clashing, COCO       The Coco Administre Range and Linkowski Clashing Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031/0131104800, 2031       Coco Administre Range and Linkowski Clashing, COCO       The Coco Administre Range and Linkowski Clashing Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031/0131104800, 2031       Cocar Administre Range and Linkowski Clashing, COCO       The Coco Administre Range and Linkowski Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031/0131104800, 2031       Cocar Administre Range and Linkowski Clashing, COCO       The Coco Administre Range and Linkowski Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 2031       Cocar Administre Range and Linkowski Clashing, COCO       The Cocor Administre Range, SBLA, SWL and Linkowski Clashing, COCO         C4: 0F-L SR LORU 2 1201/013102304, 20310113104400, 2031       Cocar Administre Range, SBLA, S	CS_OFFL_SIR_IOPM_2_20210713T020527_20210713T023735_C001	and Backscatter Quality, OCOG	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.
B2, DFHSR_UPH_2_20210713102282_20210713102282_20210713102282_202107131028282_202107131028282_20210713102828_20210713102828_20210713102828_	CS_OFFL_SIR_IOPM_2_20210713T025145_20210713T025158_C001	and Backscatter Quality, OCOG	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.
<ul> <li>CS. OFTL SR. JONA 2. 0210713703245 20210713703241 (201)</li> <li>Males Arabase Cashy, Coco Manager Farge and Basket Cashy, Coco Manager Farge and Basket Cashy, Coco Manager Farge, SBIA, SWI and Basket Cashy, Farge Farge, SBIA, SWI and Basket Cashy, Farge Farge, SBIA, SWI and Basket Cashy, Coco Manager Farge, SBIA, SWI and Basket Cashy, Farge Farge, SBIA, SWI and Basket Cashy, Coco Manager Farge, SBIA, SWI and Basket Cashy, Farge Farge Cashet, Cashy, Farge Farge Cashet, Cashet, Cashet, Cashet, Farge, SBIA, SWI and Basket Cashet, Cashy, Farge Farge Cashet, Cashet, Cashet, Farge, SBIA, SWI and Basket Cashet, Cashet, Farge, SBIA, SWI</li></ul>	CS_OFFL_SIR_IOPM_2_20210713T030256_20210713T032203_C001	and Backscatter Quality, OCOG	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.
CSL:DFL:SRUCHUL2XX 01131033342,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103453,20210713103457,2021071310457,20210713103457,2021071310457,2021071310457,	CS_OFFL_SIR_IOPM_2_20210713T032435_20210713T032914_C001	and Backscatter Quality, OCOG	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.
65.0PFL_SIR_UOW_2.32217713704582_0210713704582_02107     and Backaster Calaty, COO Allinet Frage and Backaster Calaty and E or commerces code.       05_0PFL_SIR_UOW_2.32217713704582_0210713704582_0001     Ocean Allineter Frage SINA, SWH and Backaster Calaty and Backa	CS_OFFL_SIR_IOPM_2_20210713T033245_20210713T034048_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
<ul> <li>CBL, DFFL, SIR, JOFML 2, 202107131043057, 202107131043222, 2001</li> <li>Merd Böcksetter Gualty, DCG</li> <li>CBL, DFFL, SIR, JOFML 2, 202107131050107, 202107131050176, 2021</li> <li>CBL, DFFL, SIR, JOFML 2, 202107131051027, 202107131050176, 2021</li> <li>CBL, DFFL, SIR, JOFML 2, 202107131051027, 202107131050176, 2021</li> <li>CDCG Altineer Range and Backsetter Gualty, DCGG</li> <li>CDCG Altineer Range and Backsetter Gualty, PLips Have bean</li> <li>CDCG Altineer Range and Ba</li></ul>	CS_OFFL_SIR_IOPM_2_20210713T034543_20210713T041802_C001	and Backscatter Quality, OCOG	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_JOPM_2_20210713106/07_2021071310706/07_2021071310706/07_20210713106/07_20210713106/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07_2021071310706/07	CS_OFFL_SIR_IOPM_2_20210713T043057_20210713T043222_C001	and Backscatter Quality, OCOG	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.
Ed. DFL_SIL_UPIL_2_02107131051421_02107131051451_001         Barkscatter Quality         For more more records.           CS_OFFL_SIR_UPIN_2_20210713105438_001         Coean Altimeter Range, SSHA, SWH and Backscatter Quality Flag have be Altimeter Range and Backscatter Qual	CS_OFFL_SIR_IOPM_2_20210713T050107_20210713T050716_C001	and Backscatter Quality, OCOG	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_JOPM_2_20210713706448_020101       and Backscatter Quality COG Millineter Range and Backscatter Quality Figs have be affinited Range and Backscatter Quality Figs have be affinited Range ASHA, SVH and Backscatter Quality Figs have be affinited Range, SSHA, SVH and Backscatter Quality Figs have be affinited Range, SSHA, SVH and Backscatter Quality Figs have be affinited Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T062845_0210713T062843_0001       Occin Allineter Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T062845_0210713T064653_0001       Occin Allineter Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T062850_0210713T064653_0001       Occin Allineter Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T063550_0210713T064653_0001       Occin Allineter Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T073535_0210713T074014_0001       Occin Allineter Range ASHA, SVH and Backscatter Quality Figs have bean for one or more records.         CS_OFFL_SIR_JOPM_2_20210713T073535_0210713T074014_0001 <t< td=""><td>CS_OFFL_SIR_IOPM_2_20210713T051221_20210713T051737_C001</td><td></td><td>The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.</td></t<>	CS_OFFL_SIR_IOPM_2_20210713T051221_20210713T051737_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_JOPM_2_20210713T064633_20210713T060016_C001         and Backscatter Quality, OCCG         and Backscatter Quality, CCCG           CS_OFFL_SIR_JOPM_2_20210713T060326_20210713T061409_C001         Coan Altimeter Range, SSHA, SWH         The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T062345_20210713T062632_C001         CCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T062345_20210713T062645_C001         CCG Altimeter Range, SSHA, SWH and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T062345_20210713T062645_C001         CCG Altimeter Range, SSHA, SWH and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T062363_020210713T064655_C001         CCG Altimeter Range and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T063550_20210713T0665639_C001         CCG Altimeter Range and Backscatter Quality           CS_OFFL_SIR_JOPM_2_20210713T07657_02210713T0765639_C001         CCG Altimeter Range SSHA, SWH and Backscatter Quality Flags have bean tor one or more records.           CS_OFFL_SIR_JOPM_2_20210713T07657_02210713T0765639_C001         CCG Altimeter Range SSHA, SWH and Backscatter Quality Flags have bean tor one or more records.           CS_OFFL_SIR_JOPM_2_20210713T07657_02210713T072596_C001         CCG Altimeter Range SSHA, SWH and Backscatter Quality Flags have bean tor one or more records.           CS_OFFL_SIR_JOPM_2_20210713T075240_	CS_OFFL_SIR_IOPM_2_20210713T052436_20210713T054548_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T060926_20210713T061499_C001       and Backscatter Quality. OCCG Attimeter Range and Backscatter Quality. OCCG Backscatter Quality. OCCG       the OCCG Attimeter Range. and Backscatter Quality. Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T062845_20210713T064653_C001       Ocean Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range and Backscatter Quality. Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T063630_20210713T064653_C001       Ocean Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T070537_20210713T072954_C001       Ocean Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range and Backscatter Quality. Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T07333_20210713T072954_C001       Ocean Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075549_20210713T075540_C001       Ocean Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range, SNA, SWH and Backscatter Quality. OCCG Attimeter Range, SNA, SWH and Backscatter Quality. CCCG Attimeter Range, SNA, SWH and Backscatter Quality Flags have been for one or more records. <td>CS_OFFL_SIR_IOPM_2_20210713T054833_20210713T060016_C001</td> <td>and Backscatter Quality, OCOG</td> <td>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.</td>	CS_OFFL_SIR_IOPM_2_20210713T054833_20210713T060016_C001	and Backscatter Quality, OCOG	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.
Call         Call <thcall< th="">         Call         Call         <thc< td=""><td>CS_OFFL_SIR_IOPM_2_20210713T060926_20210713T061409_C001</td><td>and Backscatter Quality, OCOG</td><td>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.</td></thc<></thcall<>	CS_OFFL_SIR_IOPM_2_20210713T060926_20210713T061409_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T062845_20210713T063443_0001       and backscatter Quality Stater Quality set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T063630_20210713T064653_0001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T063630_20210713T064653_0001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range and Backscatter Quality Set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T070357_20210713T072954_0001       Decan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range, SSHA, SWH and Backscatter Quality Flags have bear. Informeter Range and Backscatter Q	CS_OFFL_SIR_IOPM_2_20210713T062135_20210713T062632_C001		
CS_OFFL_SIR_IOPM_2_20210713T063630_20210713T064653_C001       and Backscatter Quality       and Backscatter Quality       and Backscatter Quality       set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T065350_20210713T065639_C001       DCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075249_20210713T075940_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075955_20210713T082416_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083352_20210713T083546_C001       OCCGA Altimeter Range Quality, OCCG Backscatter Quality, OCCG Backscatter Quality, OCCG Altimeter Range Quality, OCCG Backscatter Quality, Flags have been for one or more reco	CS_OFFL_SIR_IOPM_2_20210713T062845_20210713T063443_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T070357_20210713T072954_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T070357_20210713T072954_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_IOPM_2_20210713T073133_20210713T074014_C001       Ocean 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 be Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be 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 be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075955_20210713T082416_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, Plags have be Altimeter Range and Backscatter Quality, Flags have be at for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T083546_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084041_2001       OCOG Altimeter Range SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Rang	CS_OFFL_SIR_IOPM_2_20210713T063630_20210713T064653_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T070357_20210713T072954_C001       and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T073133_20210713T074014_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075249_20210713T075940_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality, Flags have be Attimeter Range and Backscatter Quality, Flags have be Attimeter Range and Backscatter Quality, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags have be Attimeter Range and Backscatter Quality, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality, Flags have be Attimeter Range and Backscatter Quality, Flags have be for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083052_20210713T083546_C001       OCCG Altimeter Range Quality, OCCG Backscatter Quality, OCCG Backscatter Quality, OCCG Attimeter Range and Backscatter Quality Flags have been if for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084041_C001       OCCG Altimeter Range Quality, OCCG Backscatter Quality, OCCG Attimeter Range and Backscatter Quality Flags have	CS_OFFL_SIR_IOPM_2_20210713T065350_20210713T065639_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210713T073133_20210713T074014_C001       and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality       and the OCOG Attimeter Range and Backscatter Quality Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T075249_20210713T075940_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality, OCOG Backscatter Quality       The Ocean Attimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083352_20210713T083546_C001       OCOG Attimeter Range Quality, OCOG Backscatter Quality       The OCOG Attimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001       OCOG Attimeter Range Quality, OCOG Backscatter Quality       The OCOG Attimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags and the OCOG Attimeter Range	CS_OFFL_SIR_IOPM_2_20210713T070357_20210713T072954_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T075249_20210713T075940_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083352_20210713T083546_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T0840651_C001       OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.       The OCean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags have	CS_OFFL_SIR_IOPM_2_20210713T073133_20210713T074014_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T075955_20210713T082416_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083352_20210713T083546_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084041_2001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.       The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084742_20210713T085906_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have be and the OCOG Altimeter Range and Backscatter Qual	CS_OFFL_SIR_IOPM_2_20210713T075249_20210713T075940_C001	and Backscatter Quality, OCOG	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_IOPM_2_202107131083352_202107131083346_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and Backscatter Quality, OCOG Backscatte	CS_OFFL_SIR_IOPM_2_20210713T075955_20210713T082416_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T084311_20210713T084041_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.         CS_OFFL_SIR_IOPM_2_20210713T084742_20210713T084742_20210713T085906_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality, OCOG	CS_OFFL_SIR_IOPM_2_20210713T083352_20210713T083546_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001       and Backscatter Quality, OCOG       and the OCOG Altimeter Range and Backscatter Quality Flags have be Altimeter Range and Backscatter Quality         Source       CS_OFFL_SIR_IOPM_2_20210713T084742_20210713T085906_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be and Backscatter Quality, OCOG	CS_OFFL_SIR_IOPM_2_20210713T083803_20210713T084041_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210713T084742_20210713T085906_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have be	CS_OFFL_SIR_IOPM_2_20210713T084311_20210713T084651_C001	and Backscatter Quality, OCOG	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.
Altimeter Range and Backscatter Quality set for one or more records.	CS_OFFL_SIR_IOPM_2_20210713T084742_20210713T085906_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T085908_20210713T090937_C001	and Backscatter Quality, OCOG	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_IOPM_2_20210713T092744_20210713T093138_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_IOPM_2_20210713T093304_20210713T094852_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_IOPM_2_20210713T095512_20210713T100555_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_IOPM_2_20210713T101232_20210713T101505_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_IOPM_2_20210713T101527_20210713T101953_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_IOPM_2_20210713T102246_20210713T103637_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_IOPM_2_20210713T103817_20210713T104114_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_IOPM_2_20210713T111508_20210713T112219_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_IOPM_2_20210713T112342_20210713T114643_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_IOPM_2_20210713T115016_20210713T115908_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_IOPM_2_20210713T120219_20210713T122517_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_IOPM_2_20210713T125218_20210713T132558_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_IOPM_2_20210713T133234_20210713T133658_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_IOPM_2_20210713T134146_20210713T140500_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_IOPM_2_20210713T141332_20210713T141858_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_IOPM_2_20210713T143401_20210713T150414_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_IOPM_2_20210713T151149_20210713T151738_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_IOPM_2_20210713T152029_20210713T153728_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_IOPM_2_20210713T155644_20210713T155811_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_IOPM_2_20210713T161017_20210713T164343_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_IOPM_2_20210713T165056_20210713T165610_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_IOPM_2_20210713T170255_20210713T170651_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_IOPM_2_20210713T171252_20210713T171711_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_IOPM_2_20210713T172343_20210713T172627_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_IOPM_2_20210713T173325_20210713T173730_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_IOPM_2_20210713T174701_20210713T175901_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_IOPM_2_20210713T180147_20210713T182257_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_IOPM_2_20210713T183104_20210713T183514_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_IOPM_2_20210713T184013_20210713T185020_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_IOPM_2_20210713T185111_20210713T185924_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_IOPM_2_20210713T190020_20210713T190426_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_IOPM_2_20210713T191022_20210713T191216_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_IOPM_2_20210713T191216_20210713T191306_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_IOPM_2_20210713T193009_20210713T193430_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_IOPM_2_20210713T193609_20210713T200204_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_IOPM_2_20210713T200430_20210713T200957_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_IOPM_2_20210713T202100_20210713T203328_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_IOPM_2_20210713T203403_20210713T205118_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_IOPM_2_20210713T211445_20210713T212424_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_IOPM_2_20210713T212627_20210713T214111_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_IOPM_2_20210713T214358_20210713T214855_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_IOPM_2_20210713T214934_20210713T215055_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_IOPM_2_20210713T215758_20210713T220928_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_IOPM_2_20210713T221455_20210713T223014_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_IOPM_2_20210713T230551_20210713T231956_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_IOPM_2_20210713T232322_20210713T232809_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_IOPM_2_20210713T232849_20210713T232959_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_IOPM_2_20210713T233600_20210713T235729_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_IOPM_2_20210713T235731_20210714T000136_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_IOPN_2_20210713T165610_20210713T165723_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_IOPN_2_20210713T171711_20210713T171735_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_IOPN_2_20210713T191306_20210713T191356_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_IOPN_2_20210713T191458_20210713T191849_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_IOPN_2_20210713T223448_20210713T223659_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_IOPR_2_20210713T054548_20210713T054833_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_IOPR_2_20210713T060017_20210713T060728_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_IOPR_2_20210713T074625_20210713T074744_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_IOPR_2_20210713T105954_20210713T110108_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_IOPR_2_20210713T110809_20210713T110906_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_IOPR_2_20210713T111136_20210713T111218_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_IOPR_2_20210713T231956_20210713T232102_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

#### L2 Quality Flags (20Hz PLRM)

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20210713T011534_20210713T011656_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_IOPN_2_20210713T012447_20210713T012546_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_IOPN_2_20210713T020141_20210713T020301_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_IOPN_2_20210713T023735_20210713T024227_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_IOPN_2_20210713T025007_20210713T025043_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_IOPN_2_20210713T034048_20210713T034200_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_IOPN_2_20210713T041802_20210713T041927_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_IOPN_2_20210713T042025_20210713T042156_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_IOPN_2_20210713T043223_20210713T043244_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_IOPN_2_20210713T043403_20210713T043526_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_IOPN_2_20210713T044043_20210713T044224_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_IOPN_2_20210713T045146_20210713T045258_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_IOPN_2_20210713T051056_20210713T051221_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_IOPN_2_20210713T062632_20210713T062844_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_IOPN_2_20210713T065041_20210713T065349_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_IOPN_2_20210713T074127_20210713T074145_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_IOPN_2_20210713T083118_20210713T083352_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_IOPN_2_20210713T083547_20210713T083803_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_IOPN_2_20210713T084041_20210713T084212_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_IOPN_2_20210713T093138_20210713T093304_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_IOPN_2_20210713T095105_20210713T095125_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_IOPN_2_20210713T095406_20210713T095512_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_IOPN_2_20210713T100615_20210713T101232_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_IOPN_2_20210713T101953_20210713T102133_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_IOPN_2_20210713T114841_20210713T115016_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_IOPN_2_20210713T115908_20210713T120107_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_IOPN_2_20210713T122548_20210713T122845_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_IOPN_2_20210713T124559_20210713T125000_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_IOPN_2_20210713T125056_20210713T125217_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_IOPN_2_20210713T133126_20210713T133233_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_IOPN_2_20210713T150758_20210713T151149_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_IOPN_2_20210713T155337_20210713T155500_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_IOPN_2_20210713T155821_20210713T155918_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_IOPN_2_20210713T160707_20210713T160812_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_IOPN_2_20210713T164743_20210713T165056_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_IOPN_2_20210713T165610_20210713T165723_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_IOPN_2_20210713T183514_20210713T183633_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_IOPN_2_20210713T191306_20210713T191356_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_IOPN_2_20210713T191458_20210713T191849_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_IOPN_2_20210713T200309_20210713T200430_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_IOPN_2_20210713T205345_20210713T205509_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_IOPN_2_20210713T205653_20210713T205755_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_IOPN_2_20210713T214216_20210713T214358_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_IOPN_2_20210713T215600_20210713T215717_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_IOPN_2_20210713T221119_20210713T221310_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_IOPN_2_20210713T223116_20210713T223356_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_IOPN_2_20210713T223448_20210713T223659_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_IOPN_2_20210713T232102_20210713T232322_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_IOPN_2_20210713T233000_20210713T233420_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_IOPR_2_20210713T020301_20210713T020527_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_IOPR_2_20210713T024227_20210713T025007_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_IOPR_2_20210713T030004_20210713T030047_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_IOPR_2_20210713T041927_20210713T042024_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_IOPR_2_20210713T042828_20210713T043057_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_IOPR_2_20210713T043526_20210713T043617_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_IOPR_2_20210713T045744_20210713T050043_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_IOPR_2_20210713T050716_20210713T051055_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_IOPR_2_20210713T052042_20210713T052436_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_IOPR_2_20210713T060017_20210713T060728_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_IOPR_2_20210713T061409_20210713T061755_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_IOPR_2_20210713T064654_20210713T065041_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_IOPR_2_20210713T070128_20210713T070357_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_IOPR_2_20210713T074014_20210713T074126_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_IOPR_2_20210713T074145_20210713T074625_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_IOPR_2_20210713T091943_20210713T092504_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_IOPR_2_20210713T094853_20210713T095105_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_IOPR_2_20210713T110143_20210713T110218_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_IOPR_2_20210713T110218_20210713T110600_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_IOPR_2_20210713T114643_20210713T114841_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_IOPR_2_20210713T123742_20210713T124514_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_IOPR_2_20210713T133929_20210713T134146_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.

	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_IOPR_2_20210713T141859_20210713T142548_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20210713T150415_20210713T150758_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_IOPR_2_20210713T151902_20210713T152029_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_IOPR_2_20210713T164343_20210713T164742_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_IOPR_2_20210713T165724_20210713T170022_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_IOPR_2_20210713T170651_20210713T171252_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_IOPR_2_20210713T172627_20210713T172816_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_IOPR_2_20210713T173731_20210713T173845_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_IOPR_2_20210713T173851_20210713T174701_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_IOPR_2_20210713T182257_20210713T182503_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_IOPR_2_20210713T183633_20210713T184013_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_IOPR_2_20210713T191849_20210713T192646_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_IOPR_2_20210713T201433_20210713T202100_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_IOPR_2_20210713T215321_20210713T215559_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_IOPR_2_20210713T223014_20210713T223116_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_IOPR_2_20210713T223659_20210713T224401_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_IOPR_2_20210713T225854_20210713T230551_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
L2 Quality Flags (1 Hz & 1Hz PLRM)	<u>'</u>	
Currently, there are several common flags raised in the Level 2 products, w	hich are summarised below.	
<ul> <li>&gt; 1Hz and 1Hz Ocean SSHA Quality Flags: These flags are currently set for provide the products with errors: 202</li> </ul>	oducts over sea ice, which is to be expected	đ.
5.8 L2 Ocean Retracking Quality Check		
L2 Retracking Flags (20Hz)		
CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz measur	ement record. The bit value of this flag indi	cates any problems when set.
Ocean Retracking Quality Flag: This flag is currently set for products over land	and sea ice, but this is to be expected. The	number of products with this error flag set is given below.
Number of products with errors: 63		
L2 Retracking Flags (20Hz, PLRM)		
CryoSat L2 data includes an ocean retracking quality flag for each 20-Hz PLRM r Ocean Retracking Quality Flag (PLRM): This flag is currently set for products II		
Number of products with errors: 146	or realized to the produces over sea ice, but the	
6. IOP L2 I	Pole-to-Pole Data Quality	Check
6.1 P2P Product Format Check		
Each product, retrieved and unpacked from the science server, is checked to ens	ure it consists of both on XML booder file (	

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

0

Number of products with errors:

### 6.2 P2P Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 0

#### 6.3 P2P 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.

Number of products with errors:

#### 6.4 P2P Auxiliary Correction Error Check

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

0

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

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

> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.

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

30

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOP_2_20210712T232926_20210713T001905_C002	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOP_2_20210713T001905_20210713T010841_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)
CS_OFFL_SIR_IOP_2_20210713T010841_20210713T015820_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 (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220210713T015820_20210713T024756_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 (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220210713T024756_20210713T033735_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)
CS_OFFL_SIR_IOP_220210713T033735_20210713T042710_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)
CS_OFFL_SIR_IOP_220210713T042710_20210713T051650_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)
CS_OFFL_SIR_IOP_220210713T051650_20210713T060625_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), 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), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOP_2_20210713T060625_20210713T065604_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)
CS_OFFL_SIR_IOP_2_20210713T065604_20210713T074540_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)
CS_OFFL_SIR_IOP_2_20210713T074540_20210713T083519_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)
CS_OFFL_SIR_IOP_2_20210713T083519_20210713T092454_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)
CS_OFFL_SIR_IOP_220210713T092454_20210713T101433_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)
CS_OFFL_SIR_IOP_220210713T101433_20210713T110409_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)
CS_OFFL_SIR_IOP_220210713T110409_20210713T115348_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)
CS_OFFL_SIR_IOP_220210713T115348_20210713T124324_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)
CS_OFFL_SIR_IOP_220210713T124324_20210713T133303_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)
CS_OFFL_SIR_IOP_220210713T133303_20210713T142238_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)
CS_OFFL_SIR_IOP_220210713T142238_20210713T151218_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)
CS_OFFL_SIR_IOP_2_20210713T151218_20210713T160153_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)
CS_OFFL_SIR_IOP_2_20210713T160153_20210713T165132_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)
CS_OFFL_SIR_IOP_2_20210713T165132_20210713T174108_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)
CS_OFFL_SIR_IOP_2_20210713T174108_20210713T183047_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)
CS_OFFL_SIR_IOP_220210713T183047_20210713T192022_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (EES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20210713T192022_20210713T201001_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)

CS_OFFL_SIR_IOP_220210713T201001_20210713T205937_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 (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220210713T205937_20210713T214916_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)
CS_OFFL_SIR_IOP_220210713T214916_20210713T223852_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)
CS_OFFL_SIR_IOP_220210713T223852_20210713T232831_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)
CS_OFFL_SIR_IOP_220210713T232831_20210714T001806_C002	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)

#### 6.5 P2P Measurement Confidence Data Check

CryoSat P2P 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:

### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20Hz)

CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors:

#### P2P Quality Flags (20Hz PLRM)

Since the P2P Quality Flags are copied directly fr	om the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	28

30

30

26

30

Number of products with errors:

#### P2P Quality Flags (1 Hz & 1Hz PLRM)

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

Number of products with errors:

#### 6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20Hz)

Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20-Hz 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 IOPR and IOPN products over sea ice, but this is to be expected.

Number of products with errors:

#### P2P Retracking Flags 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 IOPR and IOPN products over sea ice, but this is to be expected.

0

Number of products with errors:

### 7. IOP 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_IOPM1B	154	154	3	151	0
SIR_IOPR1B	111	108	0	108	0
SIR_IOPN1B	108	111	0	111	0
SIR_IOPM_2	154	154	100	54	0
SIR_IOPR_2	111	108	43	65	0
SIR_IOPN_2	108	111	34	77	0
SIR_IOP_P2P	29	29	0	29	0

#### 7.1 QCC Errors

Number of QCC reports with errors:

#### 7.2 QCC Warnings

			Total n	umber of occurrences of	each warning		
Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_IOPM1B	151	0	0	0	0	0	0
SIR_IOPM_2	0	39	42	1	44	0	36
SIR_IOPN1B	107	0	0	0	0	0	0
SIR_IOPN_2	0	11	32	5	24	28	18
SIR_IOPR1B	108	0	0	0	0	0	0
SIR_IOPR_2	0	41	42	1	36	35	21
Product Type	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSAF		DRPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	1	34	0	0	0	0	28
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	2	0	0	25	0	34	0
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	2	0	45	0	48	0	0
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF
	0	0	0	0	0	0	0
SIR_IOPM1B			4	26	0	4	36
SIR_IOPM1B SIR_IOPM_2	0	0	4	20	0	4	50
-	0 0	0	0	0	0	0	0

SIR IOPR1B	0	0		0			0
-	0	0	0	0	0		0
SIR_IOPR_2	45	0	4	63	47	12	41
Product Type	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_IOPM1B	0	0	0	0	0	0	
SIR IOPM 2	0	3	0	0	0	0	
SIR IOPN1B	0	0	0	0	47	2	
SIR IOPN 2	28	13	0	1	0	0	
SIR_IOPR1B	0	0	1	0	111	5	
SIR_IOPR_2	52	2	0	3	0	0	
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_IOP_2_	13	29	29	6	28	18	27
			•	•	*	*	•
Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR IOP 2	4	18	29	21	19	29	20
			l.	l.	1	1	l
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
SIR_IOP_2_	26	29	19	13	29		
	26	29	19	13	29		
	-	-	-	-	29	-	•

Test Description Key:					
Abbreviation	Test name	Details			
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter			
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees			
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees			
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only			
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RBSZOPOEPFDPLRM	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean			
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDPLRMSAR	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			
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees			
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean			
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean			
RSSHAOFDPLRMNCD		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			
RSWHOEPFDPLRMN	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_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch			
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