

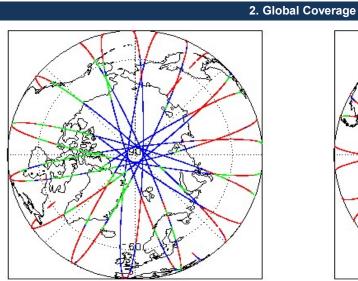
# **QA4EO Daily Report for IOP data:**

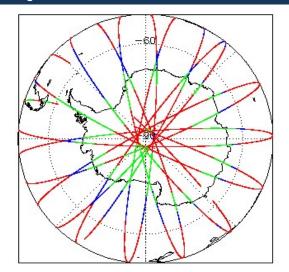
29/05/2022

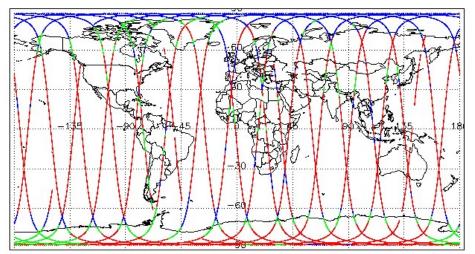
eport Production:	08-Jun-2022	Check	L1 & L2	P2P
report Production.	08-3011-2022	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used: CrvoSat Ocean Processor		Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Useu.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Intermediate Ocean Products (IOP)	Product Format Check	See Section 4.1	See Section 4.1
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 and 5.5	See Section 6.5
		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 7.1, 7.2	See Section 7.1, 7.

1. Overview

28-May-2022         None           29-May-2022         None           30-May-2022         Nothing planned	Mission / Instru	Vission / Instrument News		
	28-May-2022	None		
30-May-2022 Nothing planned	29-May-2022	None		
	30-May-2022	Nothing planned		











# 3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

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

# 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).

# 4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The I1b\_proc\_flag\_hr flag is currently set all L1B IOPR and IOPN products because the I1b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.

Number of products with errors:

### 4.3 L1B Auxilary 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:

### 4.4 L1B Auxiliary Correction Error Check

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

0

0

3

25

Number of products with errors:

### 4.5 L1B Measurement Confidence Data Check

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

Attitude Correction Missing: This flag is currently set in error for IOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20220529T071424_20220529T071511_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20220529T170821_20220529T171830_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20220529T221728_20220529T222228_C001		There is an error in the scaling of the L1B waveform for one or more records

### 4.6 L1B Waveform Group Data Check

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

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

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20220529T024901_20220529T032235_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220529T044853_20220529T050209_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220529T075906_20220529T081939_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220529T124145_20220529T124219_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T001648_20220529T001805_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T005429_20220529T005534_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T071853_20220529T072015_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T104642_20220529T105123_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T155642_20220529T160019_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T164944_20220529T165110_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T173524_20220529T173641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T181514_20220529T182128_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220529T191458_20220529T191708_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T023910_20220529T024655_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T055730_20220529T060426_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T072847_20220529T073054_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T105124_20220529T105905_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T105942_20220529T110113_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T140910_20220529T141626_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T143023_20220529T143033_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T155045_20220529T155523_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T160020_20220529T160100_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T163315_20220529T164016_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T192032_20220529T192111_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220529T222445_20220529T223449_C001	Loss of Echo	The tracking echo is missing for one or more records

# 5. IOP Level 2 Data Quality Check

### 5.1 L2 Product Format Check

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

Number of products with errors:

### 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

Not 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).

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.

50

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

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

#### Number of products with errors:

	Product	Test Failed	Description
Col: CorrEL_SRC_UPN_2_R2200207104020_20205307104020_00001         Intent (ryamin: high)(ryamin: Topography)         There is an error with the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of most resource in the Maan Dynamic Topography (high) for one of topography (high) for One of most resource in the Maan Dynamic Topography (high) for One of	CS_OFFL_SIR_IOPM_2_20220529T044853_20220529T050209_C001	Mean Dynamic Topography (1)	
C3. OFFL_SIR_IOPM_2_20220527140026_20220537100000_C001       Cenemic Coemic Territe, 105,11 value Subscription Coemic Territe, 105,11 value Subscription Coemic Coemi	CS_OFFL_SIR_IOPM_2_20220529T092334_20220529T092432_C001	Mean Dynamic Topography (1)	
CSI_OFFL_SIR_UOPL_2_0220530T000000_20220530T0000013_C001         Mean (ymain (ymai	CS_OFFL_SIR_IOPM_2_20220529T140826_20220529T140909_C001	Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non- Equilibrium Long Period Ocean Tide for one or more records
Name         Number         Number           CS_OFFL_SIR_IOPN_2_20220529T001752_20220529T001119_C001         Mean Sea Surface (1). Mean Dynamic Topography (1)         There is an error with the MSS height (clutton 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_IOPN_2_20220529T014700_20220529T015021_C001         Mean Sea Surface (1). Mean Dynamic Topography (1)         There is an error with the MSS height (clutton 1) and the Mean Dynamic Topography Height (clutton 1)           CS_OFFL_SIR_IOPN_2_20220529T034708_20220529T023810_C001         Mean Sea Surface (1). Mean Dynamic Topography (1)         There is an error with the MSS height (clutton 1) and the Mean Dynamic Topography Height (clutton 1)           CS_OFFL_SIR_IOPN_2_20220529T03456_C001         Mean Sea Surface (1). Mean Dynamic Topography (1)         There is an error with the MSS height (clutton 1) and the Mean Dynamic Topography Height (clutton 1)           CS_OFFL_SIR_IOPN_2_20220529T034708_20220529T041708_20220529T041708_20220529T041708_20220529T041708_20220529T041708_20220529T05750_C001         Mean Sea Surface (1). Mean Dynamic Topography (1)         There is an error with the MSS height (clutton 1) and the Mean Dynamic Topography Height (clutton 1)           CS_OFFL_SIR_IOPN_2_20220529T063055_2020029T069507_C001         Mean Sea Surface (1). Mean Dynamic Topography Height (clutton 1) and the Mean Dynamic Topography (1)	CS_OFFL_SIR_IOPM_2_20220529T235856_20220530T000000_C001	Mean Dynamic Topography (1)	
CSL_DFIL_SIR_LOPIN_2_2022052910420_00132_2022052910420_001         Topography (1)         Topography (1)         Topography (1)           CS_OFFL_SIR_LOPIN_2_2022052910420_0021         Mean See Surface (1), Mean Dynamic         Topography (1)         Topography (1)           CS_OFFL_SIR_LOPIN_2_202205291023108_20205291023106_0011         Mean See Surface (1), Mean Dynamic         Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_202205291023108_0001         Mean See Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_20220529104100_0001         Mean See Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_202205291056541_202205291056730_C001         Mean See Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_202205291056504_202205291065730_C001         Mean See Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_202205291062505_20205291062917_C001         Mean See Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_LOPIN_2_202205291062205_2020529106236_C001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height for one or more records           CS_OF	CS_OFFL_SIR_IOPM_2_20220530T000000_20220530T000213_C001	GIM Ionospheric corr	#N∕A
Cis_DFPL_SIR_JOPN_2_20220529T033436_20220529T033445_C001         Topography (1)         Topography (1)         Topography (1)           CS_OFFL_SIR_JOPN_2_20220529T033436_20220529T033545_C001         Mean Sea Surface (1), Mean Dynamic         Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_JOPN_2_20220529T033436_20220529T033545_C001         Mean Sea Surface (1), Mean Dynamic         Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_JOPN_2_20220529T041708_20220529T035641_20220529T055730_C001         Mean Sea Surface (1), Mean Dynamic         Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_JOPN_2_20220529T056641_20220529T055730_C001         Mean Sea Surface (1), Mean Dynamic         Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_JOPN_2_20220529T03054_20220529T03607_C001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography (1) for one or more records           CS_OFFL_SIR_JOPN_2_20220529T03054_20220529T03607_C001         Mean Dynamic Topography (1)         There is an error with the Mean Dynamic Topography height for one or more records           CS_OFFL_SIR_JOPN_2_20220529T103054_20220529T103602_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_20220529T000752_20220529T001119_C001		
CS_DFR_SIR_UORN_2_20220529T033438_20220529T033456_C001       Mean Ses Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T033438_20220529T033545_C001       Mean Ses Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T055541_20220529T055730_C001       Mean Ses Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T055505_20220529T055573_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T055505_20220529T065917_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T073807_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_UORN_2_20220529T082051_20220529T073807_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography (solution 1) and the Mean Dynamic Topography (solution 1)         CS_OFFL_SIR_UORN_2_20220529T106123_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography height (solution 1)         CS_OFFL_SIR_UORN_2_20220529T106252_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography height (solution 1)         CS_OFFL_SIR_UORN_2_20220529T	CS_OFFL_SIR_IOPN_2_20220529T014700_20220529T015021_C001		
CS_OFFL_SIR_LOPN_2_20220529T041708_0220529T041814_C001         Topography (1)         Topography height (calution 1)           CS_OFFL_SIR_LOPN_2_20220529T041708_0220529T045730_C001         Mean Ses Surface (1), Mean Dynamic         Topography height (calution 1)           CS_OFFL_SIR_LOPN_2_20220529T055641_00220529T055730_C001         Mean Dynamic Topography (1)         There is an error with the MSS height (calution 1) and the Mean Dynamic Topography height (calution 1)           CS_OFFL_SIR_LOPN_2_20220529T065564_00220529T065730_C001         Mean Dynamic Topography (1)         There is an error with the MSS height (calution 1) and the Mean Dynamic Topography height (calution 1)           CS_OFFL_SIR_LOPN_2_20220529T073054_00220529T073057_C001         Mean Dynamic Topography (1)         There is an error with the MSS height (calution 1: GOT) for one or more records           CS_OFFL_SIR_LOPN_2_20220529T082051_00220529T091052_0220529T091052_0220529T091052_0220529T091052_0220529T091052_0220529T091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0220529T1091052_0200529T102512_0C001         There is an error with the Mean Dynamic Topography height for one or more records           CS_OFFL_SIR_LOPN_2_20220529T1091052_0220529T109254_0C01         Mean Dynamic Topography (1)         There is an error with the MSS height (calution 1: more records           CS_OFFL_SIR_LOPN_2_20220529T145256_0220529T142556_0220529T142556_02200529T145254_0C01         Mean Ses Surface (1),	CS_OFFL_SIR_IOPN_2_20220529T023708_20220529T023910_C001		
Column	CS_OFFL_SIR_IOPN_2_20220529T033436_20220529T033545_C001		
CS_OFFL_SIR_IOPN_2_20220529T055805_20220529T065917_C001         Mean Dynamic Topography (1)         more records           CS_OFFL_SIR_IOPN_2_20220529T055805_20220529T073607_C001         Mean Sea Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_IOPN_2_20220529T073607_C001         Mean Dynamic Topography (1). Total         There is an error with the Mean Dynamic Topography (solution 1) and the Mean Dynamic Topography (solution 1).           CS_OFFL_SIR_IOPN_2_20220529T03054_20220529T073607_C001         Mean Dynamic Topography (1).         There is an error with the Mean Dynamic Topography (solution 1) and the Mean Dynamic Topography (solution 1).           CS_OFFL_SIR_IOPN_2_20220529T09052_2020529T082355_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_20220529T104642_20220529T105123_C001         Total Geocentric Ocean Tide (GOT)         GOT for one or more records           CS_OFFL_SIR_IOPN_2_20220529T122656_20220529T122817_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_20220529T132636_2020529T132639_C001         Mean Sea Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001         Mean Sea Surface (1), Mean Dynamic         There is an error with the MSS height (solution 1) and the Mean Dynamic To	CS_OFFL_SIR_IOPN_2_20220529T041708_20220529T041814_C001		
CS_OFFL_SIR_IOPN_2_20220529T073054_20220529T073607_C001         Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)         There is an error with the Mean Dynamic Topography (solution 1: GOT) for one or more records           CS_OFFL_SIR_IOPN_2_20220529T073054_20220529T073067_C001         Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)         There is an error with the Mean Dynamic Topography height for one or more records           CS_OFFL_SIR_IOPN_2_20220529T092051_20220529T091052_20220529T091430_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_20220529T104642_20220529T105123_C001         Total Geocentric Ocean Tide (GOT)         There is an error with the Mean Dynamic Topography height for one or more records           CS_OFFL_SIR_IOPN_2_20220529T122656_20220529T122617_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_20220529T132636_20220529T132639_C001         Mean Sea Surface (1), Mean Dynamic         Topography height (solution 1)           CS_OFFL_SIR_IOPN_2_20220529T142646_20220529T150254_C001         Mean Sea Surface (1), Mean Dynamic         Topography height (solution 1) and the Mean Dynamic           CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001         Mean Sea Surface (1), Mean Dynamic         Topography height (solution 1)           CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001         Mean Sea Surface (1), Mean Dynamic         Topography height	CS_OFFL_SIR_IOPN_2_20220529T055641_20220529T055730_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_IOPN_2_202205291082051_20220529T082355_C001         Geocentric Ocean Tide (GOT)         Total Geocentric Ocean Tide (solution 1: GOT) for one or more records           CS_OFFL_SIR_IOPN_2_20220529T082051_20220529T082355_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_20220529T091052_20220529T091430_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_20220529T104642_20220529T105123_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_20220529T122656_20220529T122817_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_20220529T132636_20220529T132939_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001         Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPN_2_20220529T065805_20220529T065917_C001		
CS_OFFL_SIR_IOPN_2_20220529T091052_20220529T1091430_C001       Mean Dynamic Topography (1)       more records         CS_OFFL_SIR_IOPN_2_20220529T104642_20220529T105123_C001       Total Geocentric Ocean Tide (GOT)       There is an error with the Mean Dynamic Topography height for one or more records         CS_OFFL_SIR_IOPN_2_20220529T104642_20220529T105123_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_20220529T122656_20220529T122817_C001       Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height for one or more records         CS_OFFL_SIR_IOPN_2_20220529T132636_20220529T132839_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T160537_20220529T160251_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and	CS_OFFL_SIR_IOPN_2_20220529T073054_20220529T073607_C001		
CS_OFFL_SIR_IOPN_2_20220529T104642_20220529T105123_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_20220529T122656_20220529T122817_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_20220529T132636_20220529T132636_20220529T132636_20220529T132636_20220529T132636_20220529T132639_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_20220529T145946_20220529T150254_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), Total Geocentric Ocean Topography (1), Total Geocentric Ocean Topography (1), Total Geocentric Ocean Topography (1), Total Geocentric O	CS_OFFL_SIR_IOPN_2_20220529T082051_20220529T082355_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_IOPN_2_20220529T122656_20220529T122817_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_20220529T122656_20220529T122817_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic Topography (1), there is an error with the MSS height (solution 1), the Mean Dynamic Topography (1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records         CS_OFFL_SIR_IOPN_2_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic Topography (solution 1), the Total Geocentric O	CS_OFFL_SIR_IOPN_2_20220529T091052_20220529T091430_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_IOPN_2_20220529T122636_20220529T122637_20220529T122637_20220529T132939_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T160537_20220529T150921_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         <	CS_OFFL_SIR_IOPN_2_20220529T104642_20220529T105123_C001	Total Geocentric Ocean Tide (GOT)	
CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001       Topography (1)       Topography leight (solution 1)         CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_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_20220529T150537_20220529T150921_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1), the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic Topography (1), the Total Geocentric Ocean Tide (GOT)       There is an error with the MSS height (solution 1), the Mean Dynamic TopOgraphy (0), The Total Geocentric Ocean Tide (GOT)       There is an error with the MSS height (solution 1) and the Mean Dynamic TopOgraphy (0)	CS_OFFL_SIR_IOPN_2_20220529T122656_20220529T122817_C001	Mean Dynamic Topography (1)	
CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001       Topography (1)       Topography height (solution 1)         CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_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_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (eight (solution 1))         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), total Geocentric Coean Topography (1), total Geocentric Coean         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic Topography (1), total Geocentric Coean         CS_OFFL_SIR_IOPN_2_20220529T191458_	CS_OFFL_SIR_IOPN_2_20220529T132636_20220529T132939_C001		
CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Topography (1)       Topography (solution 1)         CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1), the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001       Mean Sea Surface (1), Mean Dynamic       There is an error with the MSS height (solution 1) and the Mean Dynamic         CS_OFFL_SIR_IOPN_2_20220529T191458_2022052	CS_OFFL_SIR_IOPN_2_20220529T145946_20220529T150254_C001		
CS_OFFL_SIR_IOPN_2_202205291164016_202205291164250_0001       Topography (1)       Topography keight (solution 1)         CS_OFFL_SIR_IOPN_2_202205291173524_202205291173524_202205291173641_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_202205291191458_20020010000000000000000000000000000000	CS_OFFL_SIR_IOPN_2_20220529T150537_20220529T150921_C001		
CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001 Topography (1), Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic	CS_OFFL_SIR_IOPN_2_20220529T164016_20220529T164250_C001		
	CS_OFFL_SIR_IOPN_2_20220529T173524_20220529T173641_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
	CS_OFFL_SIR_IOPN_2_20220529T191458_20220529T191708_C001		

CS_OFFL_SIR_IOPN_2_20220529T191803_20220529T192032_C001	Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT and solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOPN_2_20220529T195739_20220529T195916_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_20220529T205414_20220529T205859_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), 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_20220529T214557_20220529T214829_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_20220529T231658_20220529T232048_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), 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_IOPR_2_20220529T005830_20220529T010629_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_20220529T023911_20220529T024655_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_20220529T041815_20220529T041942_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_20220529T041948_20220529T041953_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_20220529T055730_20220529T060426_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_20220529T073607_20220529T074223_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_20220529T083308_20220529T083430_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_20220529T091430_20220529T091642_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_20220529T091642_20220529T092333_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_20220529T105124_20220529T105905_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_20220529T123052_20220529T123726_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_20220529T123726_20220529T124027_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_20220529T140910_20220529T141626_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_20220529T141626_20220529T141825_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_20220529T155045_20220529T155523_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_20220529T155523_20220529T155641_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_20220529T172853_20220529T173401_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_20220529T173401_20220529T173523_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_20220529T191040_20220529T191458_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_20220529T204635_20220529T205414_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_20220529T222445_20220529T223449_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_20220529T235716_20220529T235855_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
5.5.1.2 Measurement Confidence Data Check		

# 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:
 3

 Product
 Test Failed
 Description

 CS\_OFFL\_SIR\_IOPM\_2\_20220529T071424\_20220529T071511\_C001
 Power scaling error
 There is an error in the scaling of the L2 waveform for one or more records

 CS\_OFFL\_SIR\_IOPM\_2\_20220529T170821\_20220529T171830\_C001
 Power scaling error
 There is an error in the scaling of the L2 waveform for one or more records

 CS\_OFFL\_SIR\_IOPM\_2\_20220529T221728\_20220529T222228\_C001
 Power scaling error
 There is an error in the scaling of the L2 waveform for one or more records

# 5.6 L2 Measurement Quality Flag Check

### L2 Quality Flags (20Hz)

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

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

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

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

90

Number of	products	with errors:	

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20220528T233132_20220529T000434_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_20220529T001119_20220529T001648_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_20220529T001909_20220529T002437_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_20220529T002737_20220529T003637_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_20220529T011023_20220529T012126_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_20220529T012207_20220529T014417_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_20220529T015127_20220529T015536_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_20220529T015831_20220529T021714_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_20220529T024901_20220529T032235_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_20220529T033042_20220529T033435_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_20220529T034125_20220529T041251_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_20220529T041417_20220529T041708_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_20220529T042925_20220529T043043_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_20220529T043110_20220529T044001_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_20220529T044443_20220529T044738_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_20220529T044853_20220529T050209_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_20220529T050405_20220529T050922_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_20220529T050956_20220529T051137_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_20220529T051948_20220529T052801_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_20220529T053514_20220529T054745_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_20220529T055027_20220529T055137_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_20220529T061439_20220529T062504_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_20220529T062644_20220529T064057_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_20220529T064332_20220529T064834_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_20220529T064841_20220529T064852_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_20220529T064859_20220529T065013_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_20220529T070400_20220529T070922_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_20220529T072016_20220529T072725_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_20220529T075905_20220529T081939_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_20220529T082355_20220529T082752_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_20220529T083430_20220529T090138_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_20220529T092555_20220529T093035_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_20220529T093446_20220529T095949_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_20220529T100143_20220529T100707_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_20220529T100713_20220529T101039_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_20220529T101410_20220529T104642_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_20220529T111749_20220529T113042_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_20220529T113335_20220529T113913_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_20220529T114145_20220529T114946_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_20220529T115327_20220529T122656_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_20220529T124027_20220529T124119_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_20220529T130909_20220529T131817_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_20220529T132120_20220529T132635_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_20220529T133310_20220529T135446_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_20220529T135731_20220529T140657_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_20220529T141825_20220529T142312_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_20220529T143033_20220529T143059_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_20220529T143740_20220529T144341_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_20220529T144529_20220529T145625_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_20220529T150254_20220529T150537_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_20220529T151237_20220529T153852_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_20220529T153926_20220529T154215_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_20220529T154302_20220529T154533_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_20220529T160142_20220529T160839_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_20220529T160856_20220529T163314_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_20220529T165145_20220529T165532_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_20220529T165622_20220529T170819_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_20220529T170821_20220529T171830_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_20220529T173642_20220529T174032_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_20220529T174201_20220529T175751_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_20220529T1811112_20220529T181514_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_20220529T182425_20220529T182851_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_20220529T183122_20220529T184536_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_20220529T193241_20220529T195621_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_20220529T195916_20220529T200805_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_20220529T201040_20220529T203416_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_20220529T211203_20220529T213511_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_20220529T213847_20220529T214023_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_20220529T214133_20220529T214556_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_20220529T215001_20220529T221513_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_20220529T224253_20220529T231427_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_20220529T232048_20220529T232636_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_20220529T232816_20220529T233447_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_20220529T233635_20220529T234415_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_20220529T234535_20220529T234538_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_20220529T032408_20220529T032556_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_20220529T033436_20220529T033545_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_20220529T070922_20220529T071405_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_20220529T124120_20220529T124145_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_20220529T174033_20220529T174200_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_20220529T180305_20220529T180410_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_20220529T192244_20220529T192406_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_20220529T024757_20220529T024901_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_20220529T091430_20220529T091642_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_20220529T105124_20220529T105905_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_20220529T110210_20220529T110350_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_20220529T123726_20220529T124027_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_20220529T154216_20220529T154301_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_20220529T192155_20220529T192236_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_20220529T232801_20220529T232816_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

# L2 Quality Flags (20Hz PLRM)

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

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

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

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20220529T000752_20220529T001119_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_20220529T010629_20220529T010841_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_20220529T010939_20220529T011023_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_20220529T015536_20220529T015700_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_20220529T021714_20220529T022041_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_20220529T023708_20220529T023910_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_20220529T033436_20220529T033545_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_20220529T061131_20220529T061438_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_20220529T070121_20220529T070400_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one c more records.	
CS_OFFL_SIR_IOPN_2_20220529T070922_20220529T071405_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_20220529T072725_20220529T072847_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_20220529T073054_20220529T073607_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_20220529T090847_20220529T091009_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_20220529T091052_20220529T091430_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_20220529T100024_20220529T100143_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_20220529T101039_20220529T101200_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_20220529T104642_20220529T105123_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_20220529T105906_20220529T105941_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_20220529T114946_20220529T115058_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_20220529T122915_20220529T123052_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_20220529T124302_20220529T124425_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_20220529T125700_20220529T125845_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_20220529T143532_20220529T143740_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_20220529T145946_20220529T150254_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_20220529T155642_20220529T160019_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_20220529T164445_20220529T164658_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_20220529T173524_20220529T173641_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_20220529T180004_20220529T180029_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_20220529T182852_20220529T183032_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_20220529T191458_20220529T191708_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_20220529T191803_20220529T192032_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_20220529T192244_20220529T192406_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_20220529T200805_20220529T201003_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_20220529T203838_20220529T204008_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_20220529T204404_20220529T204530_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_20220529T205414_20220529T205859_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_20220529T205954_20220529T210116_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_20220529T213717_20220529T213846_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_20220529T214023_20220529T214133_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_20220529T231658_20220529T232048_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_20220529T235152_20220529T235257_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_20220529T001805_20220529T001908_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_20220529T005118_20220529T005419_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_20220529T005830_20220529T010629_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_20220529T014418_20220529T014700_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_20220529T015700_20220529T015830_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_20220529T023525_20220529T023707_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_20220529T023911_20220529T024655_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_20220529T024757_20220529T024901_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_20220529T032236_20220529T032408_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_20220529T041815_20220529T041942_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_20220529T055730_20220529T060426_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_20220529T072848_20220529T073054_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_20220529T073607_20220529T074223_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_20220529T074256_20220529T074314_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_20220529T075714_20220529T075740_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_20220529T083308_20220529T083430_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_20220529T091430_20220529T091642_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_20220529T091642_20220529T092333_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_20220529T105124_20220529T105905_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_20220529T110210_20220529T110350_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_20220529T110911_20220529T110940_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_20220529T123052_20220529T123726_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_20220529T124220_20220529T124301_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_20220529T131818_20220529T131954_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_20220529T140657_20220529T140826_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_20220529T140910_20220529T141626_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_20220529T142313_20220529T142655_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_20220529T142704_20220529T142821_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_20220529T145625_20220529T145945_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_20220529T150922_20220529T150936_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_20220529T151033_20220529T151237_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_20220529T154534_20220529T154645_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_20220529T154905_20220529T155027_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_20220529T155045_20220529T155523_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_20220529T163315_20220529T164016_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_20220529T165111_20220529T165145_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_20220529T172853_20220529T173401_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_20220529T173401_20220529T173523_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_20220529T175751_20220529T180004_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_20220529T184959_20220529T185424_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_20220529T191040_20220529T191458_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_20220529T192155_20220529T192236_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_20220529T201004_20220529T201040_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_20220529T204635_20220529T205414_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_20220529T214830_	_20220529T215001_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_20220529T222445_	_20220529T223449_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
L2 Quality Flags (1 Hz & 1Hz PLR	(M)		
Currently, there are several common flags		which are summarised below.	
> 1Hz and 1Hz Ocean SSHA Quality Flags:	These flags are currently set for p	products over sea ice, which is to be expected.	
Number of products with errors:	191		
5.8 L2 Ocean Retracking Quali	ity Check		
L2 Retracking Flags (20Hz)			
CryoSat L2 data includes an ocean retracking	g quality flag for each 20-Hz measu	urement record. The bit value of this flag indicat	tes any problems when set.
Ocean Retracking Quality Flag: This flag is	currently set for products over lan	d and sea ice, but this is to be expected. The nu	umber of products with this error flag set is given below.
Number of products with errors:	81		
L2 Retracking Flags (20Hz, PLRM	1)		
CryoSat L2 data includes an ocean retracking	g quality flag for each 20-Hz PLRM	I measurement record. The bit value of this flag	indicates any problems when set.
Ocean Retracking Quality Flag (PLRM): Th	is flag is currently set for products	IOPR and IOPN products over sea ice, but this	is to be expected.
Number of products with errors:	130		
	6. IOP L	2 Pole-to-Pole Data Quality	Check
6.4. DOD Due durat Format Object			
6.1 P2P Product Format Check	(		
Each product, retrieved and unpacked from the	ne science server, is checked to e	nsure it consists of both an XML header file (.HI	DR) and a NetCDF product file (.nc).
Number of products with errors:	Not 0!		
6.2 P2P Product Header Analy	sis		
For all products, a series of pre-defined chec	ks are performed on the MPH and	SPH in order to identify any inconsistencies and	d/or errors raised by the ground-segment processing chain.
Number of products with errors:		of this order to identify any inconsistencies and	aron enors raised by the ground-segment processing chain.
6.3 P2P Auxiliary Data File Usa	age Check		
Each product is checked for missing Data Se	t Descriptors with respect to a pre	-determined baseline and also to check the vali	dity of Auxiliary Data Files is correct.
Number of products with errors:	0		
6.4 P2P Auxiliary Correction E	rror Check		
For all products, the auxiliary corrections with	in the Geophysical Group are che	cked for the default error value (32767)	
	ry correction errors raised in the	e Level 2 products which are expected due to	surface type. All common flags are summarised in the list below,
> ECMWF Meteo Corrections: Currently the	following corrections are not com	puted over CONTINENTAL ICE: Dry Tropospher	ric Corection, Wet Tropospheric Correction, Inverse Barometric Correction be resolved in a future IPF update. The affected products are not reported
> Sea State Bias & Sea State Bias PLRM: 1	The error value is currently set for	products over sea ice, but this is to be expected	l.
> Mean Sea Surface: The error value is curro	ently set for products over land an	d sea ice, but this is to be expected.	
> Mean Dynamic Topography: The error va	lue is currently set for products ov	er land and sea ice, but this is to be expected.	
> Altimetric Wind Speed Error: The error va	alue is currently set for products ov	ver land and sea ice, but this is to be expected.	
Number of products with errors:	30		
Product		Test Failed	Description
CS_OFFL_SIR_IOP_220220528T232230_	20220529T001209_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)
		Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic

Topography (1)	Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T001209_20220529T010145_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T010145_20220529T015123_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T015123_20220529T024059_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T024059_20220529T033038_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T033038_20220529T042014_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T042014_20220529T050953_C001 Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOP_2_20220529T050953_20220529T055929_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220529T055929_20220529T064907_C001 Mean Sea Surface (1), Mean Dy Topography (1)	ynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

CS_OFFL_SIR_IOP_220220529T064907_20220529T073843_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_220220529T073843_20220529T082822_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_220220529T082822_20220529T091758_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_220220529T091758_20220529T100737_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_220220529T100737_20220529T105713_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_220220529T105713_20220529T114652_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_220220529T114652_20220529T123627_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_220220529T123627_20220529T132606_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_220220529T132606_20220529T141542_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES). 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_220220529T141542_20220529T150521_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_220220529T150521_20220529T155457_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_220220529T155457_20220529T164435_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_220220529T164435_20220529T173411_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_220220529T173411_20220529T182350_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_220220529T182350_20220529T191326_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_220220529T191326_20220529T200305_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES). 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_220220529T200305_20220529T205241_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_220220529T205241_20220529T214220_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_IOP_220220529T214220_20220529T223156_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_220220529T223156_20220529T232134_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_IOP_220220529T232134_20220530T001110_C001	GIM lonospheric corrMean Dynamic Topography (1)	#N/A	

### 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.

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Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220220529T064907_20220529T073843_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_220220529T164435_20220529T173411_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_220220529T214220_20220529T223156_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

### 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 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 (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.

# 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.

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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.

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	176	0	0	0	0
SIR_IOPR1B	112	0	0	0	0
SIR_IOPN1B	97	0	0	0	0
SIR_IOPM_2	176	0	0	0	0
SIR_IOPR_2	112	0	0	0	0
SIR_IOPN_2	97	0	0	0	0
SIR_IOP_P2P	29	0	0	0	0