



## 1. Overview

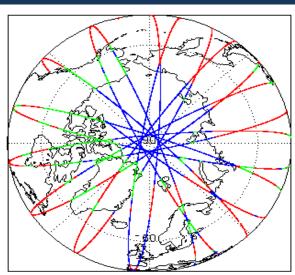
Report Production:	06-Nov-2019	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

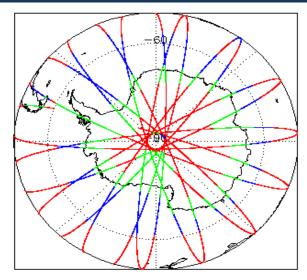
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7

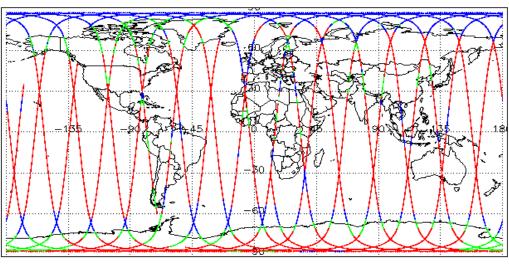
wission / instrument news		
01-Nov-2019	None	
02-Nov-2019	None	

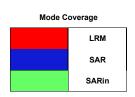
03-Nov-2019 None Nothing planned

# 2. Global Coverage









## 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

# 4. IOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

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

#### 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:

0

#### 4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

Ω

#### 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:

0

### 4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

17

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20191102T150407_20191102T151638_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T011958_20191102T012237_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T093030_20191102T093444_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T094225_20191102T094301_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T134854_20191102T135406_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T162202_20191102T162445_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T175808_20191102T180025_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T193733_20191102T194218_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191102T230111_20191102T230239_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T012238_20191102T013018_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T085523_20191102T085754_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T115907_20191102T120314_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T125309_20191102T125943_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T133841_20191102T134320_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T193325_20191102T193733_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T201802_20191102T202027_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191102T210759_20191102T210906_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:

0

### 5.2 L2 Product Header Analysis

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

Number of products with errors:

0

## 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

### 5.4 L2 Auxiliary Correction Error Check

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

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

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

51

Topography (1)  Topography (2)  Topography (2)  Topography (3)  Topography (3)  Topography (4)  Topography (4)	Product	Test Failed	Description
CS_OFFL_SR_ION_2_2019102703002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191027003002_20191	CS_OFFL_SIR_IOPM_2_20191102T042011_20191102T043531_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	
May 58 sufface (1), Mean Dynamic Topography (1) and recording one records not record to the part of th	CS_OFFL_SIR_IOPN_2_20191102T003023_20191102T003343_C001	Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_JOPN_2_20191102T091025_00191102T091027_00101  Mean Sea Surface (1), Mean Dynamic Topography (selution 1), and the Mean Dynamic Topography (selution	CS_OFFL_SIR_IOPN_2_20191102T003902_20191102T004025_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T03403_20191102T039138_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (calulion 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T034054_20191102T034058_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T044053_20191102T044053_C001  Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geometric Colors Tibe (2), Mean Dynamic Topography (1), Total Geometric Colors Tibe (2), Mean Dynamic Topography (1), Total Geometric Colors Tibe (2), Mean Dynamic Topography (1), Total Geometric Colors Tibe (2), Mean Dynamic Topography (1), Total Geometric Colors Tibe (2), Mean Dynamic Topography (2), Mean Dynamic Topography (2), Mean Dynamic Topography (2), Mean Dynamic Topography (2), Total Geometric Colors Tibe (2), Mean Dynamic Topography (3), Mean Dynamic Topography (3), Mean Dynamic Topography (3), Mean Dynamic Topography (4), Mean Dynamic Topography Medit for one on more records  CS_OFFL_SIR_IOPN_2_20191102T134054_20191102T121244_2001  Mean Dynamic Topography (4), Mean Dynamic Topography Medit footution (4), and the Mean Dynamic Topography Medit footution (5), and the Mean Dynamic Topograp	CS_OFFL_SIR_IOPN_2_20191102T011958_20191102T012237_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	
Topography (1)  CS_OFFL_SIR_IOPN 2_20191102T034554_20191102T034731_C001  Mean Dynamic Topography (1)  Mean Dynamic Topography (1)  Mean Beas Surface (1), Mean Dynamic Topography height for one or records  Topography (1)  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height for one or records  Topography (1)  Mean Dynamic Topography (	CS_OFFL_SIR_IOPN_2_20191102T021740_20191102T021907_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_JOPN_2_2019110271034549_201911027104053_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 Cosen Tide (Solution 1). There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1). Total Geocentric Cosen Tide (Solution 1). There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1). Total Geocentric Cosen Tide (Solution 1). There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1). Total Geocentric Cosen Tide (Solution 1). There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1). Total Geocentric Cosen Tide (Solution 1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography height for one or more records.  CS_OFFL_SIR_JOPN_2_20191102T075421_20191102T07545_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_20191102T102T05320_20191102T075745_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_20191102T111202_20191102T111403_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_20191102T112053_20191102T1121254_C001  Mean Sea Surface (1), Mean Dynamic Topography (1). There is an error with the Mean Dynamic Topography height for one or more records.  CS_OFFL_SIR_JOPN_2_20191102T134854_20191102T134604_C001  Mean Sea Surface (1), Mean Dynamic Topography height folution 1) and the Mean Dynamic Topography height (	CS_OFFL_SIR_IOPN_2_20191102T030035_20191102T030138_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Topography (1)  CS_OFFL_SIR_JOPN_2_20191102T043837_20191102T044053_C001  Mean Dynamic Topography (1) Total Geocomic Coatan Tide (GOT)_Total Geocomic Coatan Tide (GOT	CS_OFFL_SIR_IOPN_2_20191102T034554_20191102T034731_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T054147_20191102T054530_C001  Mean Dynamic Topography (1). Total Geocentric Cosan Tide (CDT). Total CS_OFFL_SIR_IOPN_2_20191102T054147_20191102T054942_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (solution 1). There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height for one of more records.  There is an error with the Mean Dynamic Topography height foolution 1)	CS_OFFL_SIR_IOPN_2_20191102T035456_20191102T035658_C001	, ,,	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20191102T064147_20191102T064530_CO01  Wean Dynamic Topography (1)  Mean Sas Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (1)  Mean Sas Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography height (solution 1)  Mean Sas Surface (1), Mean Dynamic Topography height (solution 1)  Topography height (solutio	CS_OFFL_SIR_IOPN_2_20191102T043837_20191102T044053_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20191102T071421_20191102T075746_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one o more records  CS_OFFL_SIR_IOPN_2_20191102T075209_20191102T075746_C001  Mean Dynamic Topography (1)  Mean Sea Surface (1), Total Geocentric Cocan Tide (GOT)  CS_OFFL_SIR_IOPN_2_20191102T111202_20191102T111403_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one o more records  CS_OFFL_SIR_IOPN_2_20191102T111202_20191102T111403_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one o more records  CS_OFFL_SIR_IOPN_2_20191102T1120314_20191102T1120440_C001  Mean Dynamic Topography (1)  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one o more records  CS_OFFL_SIR_IOPN_2_20191102T120332_20191102T121254_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPN_2_20191102T134824_20191102T134824_C001  Mean Dynamic Topography (1)  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1)	CS_OFFL_SIR_IOPN_2_20191102T054147_20191102T054530_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
CS_OFFL_SIR_IOPN_2_20191102T075209_20191102T075746_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one o more records  CS_OFFL_SIR_IOPN_2_20191102T193333_20191102T093344_C001  Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Total Geocetric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocetric Ocean Tide (GOT)  There is an error with the MSS 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)  There is an error with the MSS 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)  There is an error with the MSS 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)  There is an error with the MSS 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)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error	CS_OFFL_SIR_IOPN_2_20191102T061421_20191102T061924_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)  Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topogra	CS_OFFL_SIR_IOPN_2_20191102T071421_20191102T071632_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Ocean Tide (sOT) for one or more records  Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mean Dynamic Topography height for one or more records  There is an error with the Mash Dynamic Topography height for one or more records  There is an error with the Mash Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T134320_20191102T134624_C001  Mean Dynamic Topography (1)  Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T144033_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)  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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 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 Topography height (solution 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 Topography height (solution 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 Topography height (solution 1)  There is an error with the MSS height (solution 1	CS_OFFL_SIR_IOPN_2_20191102T075209_20191102T075746_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_20191102T11202_20191102T121254_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height for one on more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T134320_20191102T134624_C001  Mean Dynamic Topography (1)  There is an error with the MSS 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_20191102T134854_20191102T135406_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T143955_20191102T144033_C001  CS_OFFL_SIR_IOPN_2_20191102T161841_20191102T161957_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T161841_20191102T161957_C001  CS_OFFL_SIR_IOPN_2_20191102T161841_20191102T162445_C001  CS_OFFL_SIR_IOPN_2_20191102T162202_20191102T162445_C001  CS_OFFL_SIR_IOPN_2_20191102T175808_20191102T180025_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T175808_20191102T180025_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)  There is an error with the MSS 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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography h	CS_OFFL_SIR_IOPN_2_20191102T093030_20191102T093444_C001		There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20191102T120353_20191102T121254_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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solutio	CS_OFFL_SIR_IOPN_2_20191102T111202_20191102T111403_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Topography (1)  Topography (220191102T12493_20191102T134624_C001  Mean Dynamic Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1)  There is an error with the MSS 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)  There is an error with the MSS 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)  There is an error with the MSS 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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Total Geocentric Ocean Tide (GOT)  Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Total Geocentric Ocean Tide (GOT)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Topography (1)  There is an error with the MSS 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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the 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_20191102T120314_20191102T120440_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_20191102T134354_20191102T135406_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  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)  There is an error with the Total Geocentric Ocean Tide (GOT)  There is an error with the Total Geocentric Ocean Tide height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 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 Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the 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_20191102T120953_20191102T121254_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Topography (1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the Total Geocentric Ocean Tide (GOT)  There is an error with the Total Geocentric Ocean Tide height (solution 1)  There is an error with the Total Geocentric Ocean Tide height (solution 1)  There is an error with the Total Geocentric Ocean Tide height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the 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_20191102T134320_20191102T134624_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Topography (1)  Topography (220191102T161841_20191102T161957_C001  Topography (1)  Topography (1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1)  Total Geocentric Ocean Tide (GOT)  Total Geocentric Ocean Tide (GOT)  Total Geocentric Ocean Tide (GOT)  There is an error with the Total Geocentric Ocean Tide height (solution 1)  Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Topography (1)  Topography height (solution 1)  Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Topography (1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the 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_20191102T134854_20191102T135406_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Topography (1)  Topography (2)  Topography (2)  Topography (3)  Topography (4)  Topography (5)  Topography (6)  Topography (6)  Topography (7)  Topography (8)  Topography (8)  Topography (9)  Topography (9)  Topography (1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynat Topography (1)  Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynat Topography (1)  Topography (1)  Topography (1)  Topography height (solution 1)  Topography height (solution 1)  Topography (1)  Topography (1)  Topography (1)  Topography height (solution 1)  Topography height (solution 1) and the Mean Dynat Topography height (solution 1)  Topography (1)  Topography (1)  Topography (1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1)  Topography (1)  Topography (8)  Topography (8	CS_OFFL_SIR_IOPN_2_20191102T143955_20191102T144033_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20191102T184050_20191102T184233_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPN_2_20191102T184050_20191102T184233_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  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)  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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the 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_20191102T161841_20191102T161957_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Topography (1)  CS_OFFL_SIR_IOPN_2_20191102T184050_20191102T184233_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPN_2_20191102T193733_20191102T194218_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)  Topography (2)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (2)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Topography (1)  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_20191102T162202_20191102T162445_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
Topography (1)  Topography (20191102T193733_20191102T194218_C001  Topography (1)  Topography (20191102T193733_20191102T194218_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPN_2_20191102T175808_20191102T180025_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
Topography (1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1)  Topography height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the MSS height (solution 2) and the MSS height (solution 3) are the MSS height (solution 3) and the MSS height (solution 3) are the MSS height (solution 3) and the MSS height (solution 3) are the	CS_OFFL_SIR_IOPN_2_20191102T184050_20191102T184233_C001	, ,,	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
	CS_OFFL_SIR_IOPN_2_20191102T193733_20191102T194218_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
	CS_OFFL_SIR_IOPN_2_20191102T202907_20191102T203148_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

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CS_OFFL_SIR_IOPN_2_20191102T220011_20191102T220400_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_20191102T230111_20191102T230239_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_20191102T233950_20191102T234305_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_20191102T234817_20191102T234935_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_20191102T012238_20191102T013018_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_20191102T030139_20191102T030849_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_20191102T044053_20191102T044738_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_20191102T061924_20191102T062447_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_20191102T075747_20191102T080723_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_20191102T093445_20191102T094225_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_20191102T111403_20191102T112045_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_20191102T112045_20191102T112251_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_20191102T125309_20191102T125943_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_20191102T125944_20191102T130141_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_20191102T143407_20191102T143838_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_20191102T143838_20191102T143955_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_20191102T161211_20191102T161710_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_20191102T161711_20191102T161841_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_20191102T175345_20191102T175808_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_20191102T192914_20191102T192927_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_20191102T192927_20191102T193154_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_20191102T193325_20191102T193733_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_20191102T211137_20191102T211812_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_20191102T224017_20191102T224118_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_20191102T225126_20191102T225914_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)

## 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:

## 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.

Number of products with errors: 89

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20191101T235341_20191102T000249_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T000534_20191102T002654_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPM_2_20191102T003343_20191102T003449_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T003453_20191102T003901_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T004428_20191102T010036_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T013019_20191102T020535_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T020858_20191102T021347_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T021407_20191102T021740_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T022447_20191102T025628_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T025806_20191102T030035_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T031020_20191102T032328_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T032809_20191102T034503_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T040252_20191102T041624_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T042011_20191102T043531_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T043630_20191102T043703_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T045807_20191102T050829_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T051009_20191102T052342_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T052655_20191102T053156_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T054029_20191102T054146_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T054531_20191102T055321_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T055727_20191102T060216_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T060459_20191102T061046_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T061209_20191102T061421_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T064107_20191102T070202_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality I and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T070728_20191102T071112_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T071134_20191102T071421_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T071839_20191102T074603_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T081759_20191102T084136_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T084509_20191102T085026_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.

	OCOG Altimeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Quality Flags have been set
CS_OFFL_SIR_IOPM_2_20191102T085033_20191102T085359_C001	Backscatter Quality	for one or more records.
CS_OFFL_SIR_IOPM_2_20191102T085755_20191102T093029_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_20191102T094343_20191102T094512_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_20191102T094516_20191102T094558_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_20191102T095449_20191102T100114_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_20191102T100119_20191102T101255_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_20191102T101700_20191102T102054_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_20191102T102509_20191102T103302_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_20191102T103843_20191102T111021_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_20191102T112251_20191102T112438_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_20191102T112913_20191102T113148_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_20191102T114547_20191102T114743_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_20191102T115027_20191102T115907_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_20191102T120440_20191102T120952_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_20191102T121708_20191102T123804_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_20191102T124049_20191102T125231_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_20191102T130142_20191102T130435_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_20191102T132051_20191102T132700_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_20191102T132836_20191102T133841_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_20191102T135619_20191102T143138_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_20191102T144403_20191102T150403_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_20191102T150407_20191102T151638_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_20191102T152956_20191102T153305_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_20191102T153532_20191102T155025_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_20191102T155228_20191102T160251_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_20191102T162445_20191102T164108_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_20191102T165733_20191102T165830_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_20191102T170437_20191102T170721_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_20191102T170737_20191102T171205_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_20191102T171513_20191102T172851_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_20191102T173031_20191102T173314_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_20191102T173741_20191102T174346_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_20191102T180342_20191102T180600_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_20191102T180723_20191102T181313_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_20191102T181557_20191102T183847_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_20191102T184233_20191102T185111_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_20191102T185458_20191102T191838_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_20191102T195042_20191102T201801_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_20191102T202447_20191102T202906_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_20191102T203417_20191102T205754_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_20191102T210907_20191102T211137_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_20191102T212547_20191102T215540_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_20191102T220400_20191102T220946_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_20191102T222144_20191102T222639_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_20191102T223025_20191102T223503_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_20191102T223925_20191102T223932_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_20191102T223935_20191102T224016_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_20191102T224850_20191102T225040_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_20191102T230240_20191102T233538_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_20191102T234305_20191102T234817_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_20191102T235348_20191103T000923_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_20191102T093030_20191102T093444_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_20191102T113309_20191102T113350_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_20191102T120314_20191102T120440_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_20191102T120953_20191102T121254_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_20191102T165650_20191102T165711_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_20191102T011912_20191102T011957_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_20191102T043704_20191102T043837_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_20191102T111110_20191102T1111201_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_20191102T210227_20191102T210304_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

### L2 Quality Flags (20Hz PLRM)

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

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

Number of products with errors:

97

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20191102T003023_20191102T003343_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_20191102T010036_20191102T010401_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_20191102T020659_20191102T020858_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_20191102T021740_20191102T021907_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_20191102T030035_20191102T030138_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_20191102T034554_20191102T034731_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_20191102T035456_20191102T035658_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_20191102T045524_20191102T045803_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_20191102T054147_20191102T054530_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_20191102T055321_20191102T055727_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_20191102T061047_20191102T061208_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_20191102T061421_20191102T061924_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_20191102T062447_20191102T062504_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_20191102T063528_20191102T063927_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_20191102T071421_20191102T071632_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_20191102T075209_20191102T075746_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_20191102T081709_20191102T081759_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_20191102T084339_20191102T084509_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_20191102T093030_20191102T093444_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_20191102T094225_20191102T094301_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_20191102T112623_20191102T112746_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_20191102T120953_20191102T121254_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_20191102T134320_20191102T134624_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_20191102T134854_20191102T135406_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_20191102T152332_20191102T152605_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_20191102T152801_20191102T152956_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_20191102T160251_20191102T160543_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_20191102T161841_20191102T161957_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_20191102T165831_20191102T170436_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_20191102T171205_20191102T171347_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_20191102T180113_20191102T180341_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_20191102T180600_20191102T180723_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_20191102T191838_20191102T192107_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_20191102T193733_20191102T194218_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_20191102T194308_20191102T194430_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_20191102T194922_20191102T195031_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_20191102T202331_20191102T202447_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_20191102T202907_20191102T203148_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_20191102T220011_20191102T220400_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_20191102T220946_20191102T221105_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_20191102T222812_20191102T223007_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_20191102T224549_20191102T224711_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_20191102T225040_20191102T225125_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_20191102T230111_20191102T230239_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_20191102T233950_20191102T234305_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

	Ocean Altimeter Range, SSHA, SWH	l-,
CS_OFFL_SIR_IOPN_2_20191102T234817_20191102T234935_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20191102T000250_20191102T000534_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_20191102T004025_20191102T004427_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_20191102T012238_20191102T013018_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_20191102T021908_20191102T022446_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_20191102T030139_20191102T030849_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_20191102T032328_20191102T032809_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_20191102T041624_20191102T041838_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_20191102T041847_20191102T042010_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_20191102T044053_20191102T044738_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_20191102T075747_20191102T080723_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_20191102T085523_20191102T085754_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_20191102T093445_20191102T094225_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_20191102T094558_20191102T094710_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_20191102T101255_20191102T101700_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_20191102T102054_20191102T102345_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_20191102T111403_20191102T112045_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_20191102T112045_20191102T112251_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_20191102T112532_20191102T112623_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_20191102T113245_20191102T113309_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_20191102T115907_20191102T120314_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_20191102T121254_20191102T121708_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_20191102T125232_20191102T125306_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_20191102T125309_20191102T125943_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_20191102T125944_20191102T130141_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_20191102T130435_20191102T131139_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_20191102T133841_20191102T134320_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_20191102T143407_20191102T143838_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_20191102T143838_20191102T143955_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_20191102T151639_20191102T152331_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_20191102T155025_20191102T155202_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_20191102T161211_20191102T161710_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_20191102T164108_20191102T164320_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_20191102T171347_20191102T171512_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_20191102T173314_20191102T173623_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_20191102T175158_20191102T175329_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_20191102T175345_20191102T175808_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_20191102T183847_20191102T184050_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_20191102T185251_20191102T185458_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_20191102T192914_20191102T192927_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_20191102T192927_20191102T193154_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_20191102T193325_20191102T193733_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_20191102T201802_20191102T202027_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_20191102T210759_20191102T210907_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_20191102T211137_20191102T211812_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_20191102T215541_20191102T220011_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_20191102T221105_20191102T221318_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_20191102T223643_20191102T223925_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_20191102T224506_20191102T224548_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_20191102T230029_20191102T230110_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_20191102T233538_20191102T233950_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

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

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

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

### 5.8 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20Hz)

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

Ocean Retracking Quality Flag: This flag is currently set for products over land and sea ice, but this is to be expected. The number of products with this error flag set is given below.

Number of products with errors:

64

#### L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors:

151

## 6. IOP L2 Pole-to-Pole Data Quality Check

### 6.1 P2P 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 NetCDF product file (.nc).

Number of products with errors:

Λ

#### 6.2 P2P Product Header Analysis

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

Number of products with errors:

Λ

### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

\_

### 6.4 P2P Auxiliary Correction Error Check

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

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.
- > 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:

29

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220191101T234455_20191102T003432_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_220191102T003432_20191102T012409_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_220191102T021345_20191102T030322_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_220191102T030322_20191102T035259_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_220191102T035259_20191102T044236_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_220191102T044236_20191102T053212_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_220191102T053212_20191102T062149_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_220191102T062149_20191102T071126_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_220191102T071126_20191102T080103_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_220191102T080103_20191102T085040_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_220191102T085040_20191102T094017_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_220191102T094017_20191102T102953_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_220191102T102953_20191102T111930_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_220191102T111930_20191102T120907_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_220191102T120907_20191102T125844_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_220191102T125844_20191102T134820_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_220191102T134820_20191102T143757_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_220191102T143757_20191102T152734_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_220191102T152734_20191102T161711_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_220191102T161711_20191102T170647_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_220191102T170647_20191102T175625_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_220191102T175625_20191102T184601_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_220191102T184601_20191102T193538_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_220191102T193538_20191102T202515_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_220191102T202515_20191102T211452_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_220191102T211452_20191102T220428_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_220191102T220428_20191102T225405_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_220191102T225405_20191102T234342_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_220191102T234342_20191103T003319_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

### 6.5 P2P Measurement Confidence Data Check

CryoSat P2P data includes a measurement confidence flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

0

### 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.

Number of products with errors:

## 6.8 P2P Ocean Retracking Quality Check

### P2P Retracking Flags (20Hz)

Cryosat P2P data includes an ocean retracking quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

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

Number of products with errors: 28

### 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: 29