

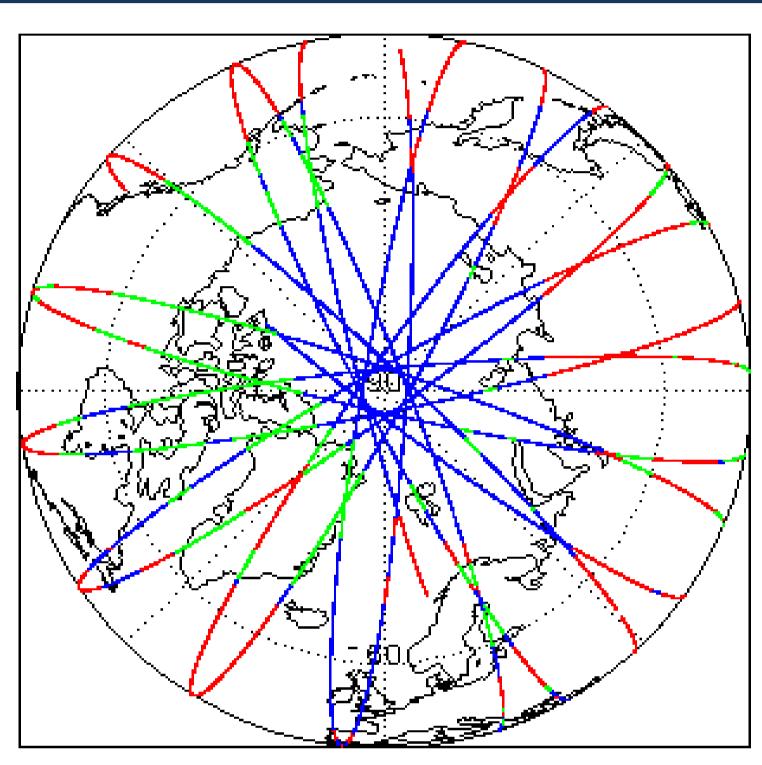
# 1. Overview

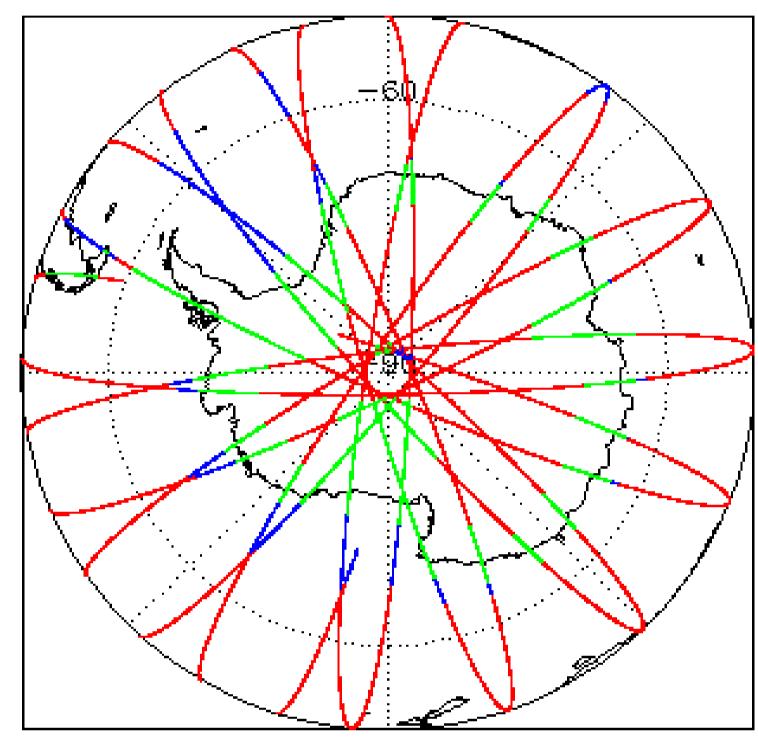
Report Production:	24-Feb-2021	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

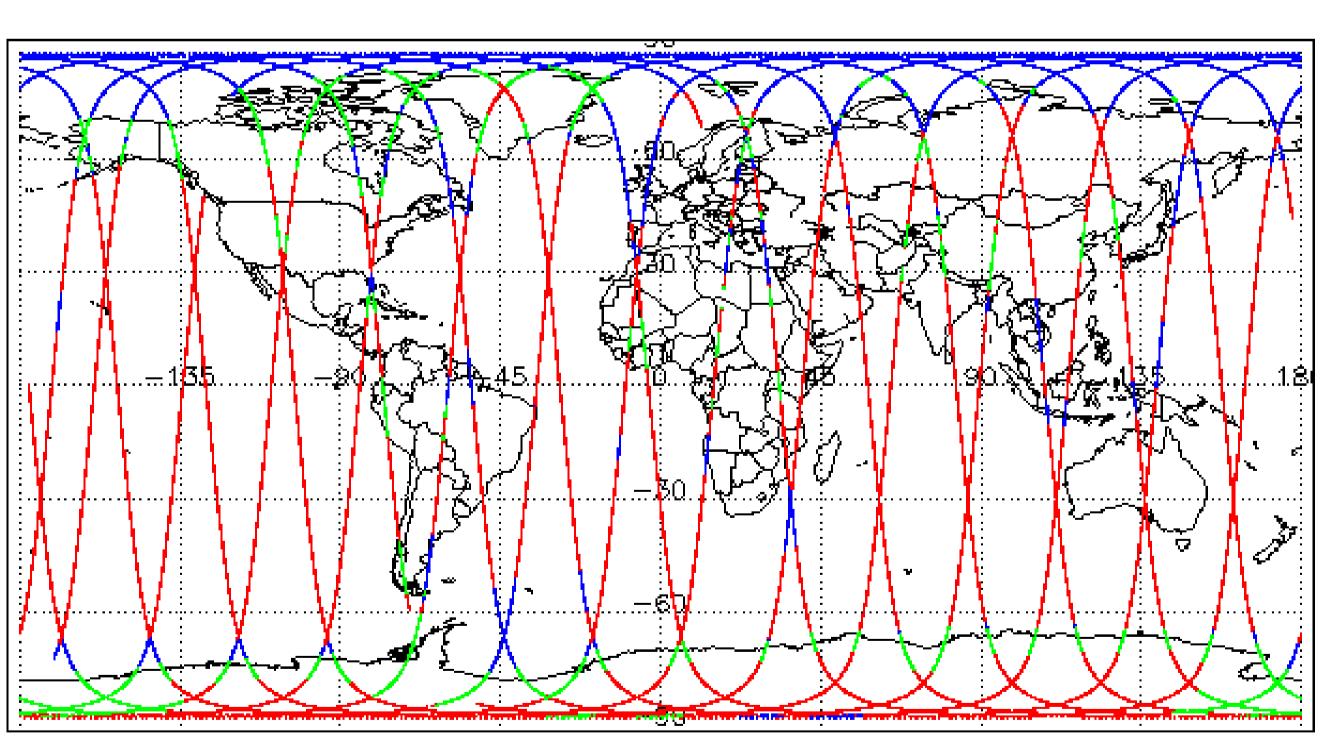
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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
QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

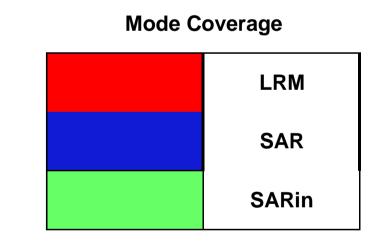
M	ission / Instru	ment News
2	20-Feb-2021	None
2	21-Feb-2021	None
2	22-Feb-2021	Nothing planned

# 2. Global Coverage









# 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

# 4. IOP Level 1B Data Quality Check

## 4.1 L1B Product Format Check

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

### 4.2 L1B Product Header Analysis

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

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

Number of products with errors:

### 4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

### **4.4 L1B Auxiliary Correction Error Check**

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

0

0

10

Number of products with errors:

#### 4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

#### 4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPN1B_20210221T014104_20210221T014343_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210221T060254_20210221T060641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210221T150109_20210221T150502_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210221T181924_20210221T182140_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210221T230929_20210221T231010_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210221T045332_20210221T045641_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210221T091632_20210221T091753_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210221T163831_20210221T163956_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210221T181502_20210221T181924_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210221T212908_20210221T213930_C001	Loss of Echo	The tracking echo is missing for one or more records

## 5. OP Level 2 Data Quality Check

### **5.1 L2 Product Format Check**

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

Number of products with errors:

### **5.2 L2 Product Header Analysis**

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

Number of products with errors:

### **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: 55

Product		Description
		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_IOPM_2_20210221T082816_20210221T082903_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

CS_OFFL_SIR_IOPM_2_20210221T195003_20210221T195045_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20210221T230046_20210221T230137_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_20210221T001111_20210221T001444_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_20210221T005125_20210221T005446_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_20210221T010005_20210221T010129_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_20210221T014104_20210221T014343_C001	Topography (1), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more
CS_OFFL_SIR_IOPN_2_20210221T023845_20210221T024012_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_20210221T032142_20210221T032245_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_20210221T041601_20210221T041804_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_20210221T045945_20210221T050200_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_20210221T060254_20210221T060641_C001	Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Fauilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOPN_2_20210221T063530_20210221T064033_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_20210221T073529_20210221T073740_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_20210221T081319_20210221T081856_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_20210221T095141_20210221T095555_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	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_20210221T113315_20210221T113515_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_20210221T122423_20210221T122549_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_20210221T123103_20210221T123405_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_20210221T141006_20210221T141519_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_20210221T150109_20210221T150502_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210221T163956_20210221T164112_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_20210221T164316_20210221T164558_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20210221T171943_20210221T172550_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_20210221T181924_20210221T182140_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_20210221T190204_20210221T190347_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_20210221T195850_20210221T200334_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_20210221T205023_20210221T205306_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_20210221T222127_20210221T222516_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_20210221T232229_20210221T232357_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_20210221T000235_20210221T001110_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_20210221T014343_20210221T015126_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_20210221T032245_20210221T032959_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_20210221T045332_20210221T045641_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FFS) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records

CS_OFFL_SIR_IOPR_2_20210221T050200_20210221T050844_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_20210221T064033_20210221T064555_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_20210221T081857_20210221T082319_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_20210221T082319_20210221T082816_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_20210221T095556_20210221T100335_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_20210221T113515_20210221T114158_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_20210221T114158_20210221T114504_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_20210221T131342_20210221T132058_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_20210221T132058_20210221T132306_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_20210221T145521_20210221T145955_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_20210221T145955_20210221T150108_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_20210221T163325_20210221T163831_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_20210221T163831_20210221T163956_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_20210221T181502_20210221T181924_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_20210221T195046_20210221T195049_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_20210221T195049_20210221T195312_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_20210221T195442_20210221T195850_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_20210221T212908_20210221T213930_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_20210221T230137_20210221T230239_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_20210221T231245_20210221T232032_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.

0

Number of products with errors: 88

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210220T235931_20210221T000235_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_20210221T001524_20210221T002350_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_20210221T002635_20210221T003418_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_20210221T003421_20210221T004928_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_20210221T005446_20210221T005552_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

COUNTLINE DRIVE ARREST TREATS ACTION TO ARREST TREATS COUNT TO ARREST COUNTRY TO ARR	CS_OFFL_SIR_IOPM_2_20210221T005557_20210221T010005_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
### COOK A March Flags and Secretaria Calify Flags was well as	CS_OFFL_SIR_IOPM_2_20210221T010133_20210221T012142_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Column	CS_OFFL_SIR_IOPM_2_20210221T015345_20210221T022739_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Col. OFFL SR 10PM 2 2010021132103 2210221105040 COL.	CS_OFFL_SIR_IOPM_2_20210221T023003_20210221T023451_C001	_	
Bencamber   Capture   Ca	CS_OFFL_SIR_IOPM_2_20210221T023457_20210221T023504_C001		
CRIS CHEP   SHI   DPM 2   721/027   TD4/05   201/1221   TD4/05	CS_OFFL_SIR_IOPM_2_20210221T023511_20210221T023845_C001		
and Backassier Quilly, COCS	CS_OFFL_SIR_IOPM_2_20210221T024056_20210221T024306_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
December 1997  CS. OFFL SIR: OPR4 2 20210221T00919 2011021T054511 C001  CS. OFFL SIR: OPR4 2 20210221T04919 2011021T054511 C001  CS. OFFL SIR: OPR4 2 20210221T04919 2011021T054517 C001  CS. OFFL SIR: OPR4 2 20210221T04919 2011021T05452 C001  CS. OFFL SIR: OPR4 2 20210221T04905 2011021T05455 C001  CS. OFFL SIR: OPR4 2 20210221T04005 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210221T05419 2 2011021T05419 C001  CS. OFFL SIR: OPR4 2 20210	CS_OFFL_SIR_IOPM_2_20210221T024553_20210221T031721_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and the COCG Altrenter Range and Biodecaster Caulity Flags have been Afficience Range and Biodecaster Caulity Flags and Biodecaster Caulity Flags have been afficience Range and Biodecaster Caulity Flags have been afficienc	CS_OFFL_SIR_IOPM_2_20210221T031917_20210221T032141_C001		
and flaudscatter Quality, QCOG Allimeter Range and Blackscatter Quality Flags have been addressed to make the COGO Allimeter Range and Blackscatter Quality Flags and Blackscatter Quality, QCOG Allimeter Range and Blackscatter Quality Flags and Blackscatter Quality, QCOG Allimeter Range and Blackscatter Quality Flags and Blackscatter Quality, QCOG Allimeter Range Q	CS_OFFL_SIR_IOPM_2_20210221T033719_20210221T034431_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscater Quality. OCOG Altimeter Range and Backscater Quality Flags have been set for one or more records.  CS_OFFL_SIR_JOPM_2_20210221T040835_20210221T04330_CO01  CS_OFFL_SIR_JOPM_2_20210221T040835_20210221T04332_CO01  OCOG Altimeter Range Quality, OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more records.  OCOG Altimeter Range SSHA, SWH and Backscater Quality Flags have been set for one or more	CS_OFFL_SIR_IOPM_2_20210221T034912_20210221T034947_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Deam Allimeter Range. SSHA, SWH and Backscatter Quality Flags have been set for no or more records.  CS_OFFL_SIR_IOPM_2_20210221T043121_20210221T045112_C001  CS_OFFL_SIR_IOPM_2_20210221T044121_20210221T045112_C001  CS_OFFL_SIR_IOPM_2_20210221T04121_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T05125502_C001  CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051308_C001  CS_OFFL_SIR_IOPM_2_20210221T051312_20210221T051308_C001  CS_OFFL_SIR_IOPM_2_20210221T051312_20210221T051308_C001  CS_OFFL_SIR_IOPM_2_20210221T051312_20210221T051308_C001  CS_OFFL_SIR_IOPM_2_20210221T051312_20210221T051308_C001  CS_OFFL_SIR_IOPM_2_20210221T051317_20210221T051309_C001  CS_OFFL_SIR_IOPM_2_20210221T051317_20210221T051326_C001  CS_OFFL_SIR_IOPM_2_20210221T051317_20210221T051326_C001  CS_OFFL_SIR_IOPM_2_20210221T051317_20210221T051326_C001  CS_OFFL_SIR_IOPM_2_20210221T051317_20210221T051236_C001  CS_OFF	CS_OFFL_SIR_IOPM_2_20210221T035019_20210221T040658_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS OFFL SIR IOPM 2 20210221T04121 20210221T051254 C001  CS OFFL SIR IOPM 2 20210221T051251 20210221T052754 C001  CS OFFL SIR IOPM 2 20210221T051252 20210221T05250 C001  CS OFFL SIR IOPM 2 20210221T05125 20210221T05250 C001  CS OFFL SIR IOPM 2 20210221T054001 20210221T054000 C001  CS OFFL SIR IOPM 2 20210221T056004 20210221T054000 C001  CS OFFL SIR IOPM 2 20210221T056004 20210221T054000 C001  CS OFFL SIR IOPM 2 20210221T056004 20210221T054000 C001  CS OFFL SIR IOPM 2 20210221T060004 20210221T060000 C001  CS OFFL SIR IOPM 2 202102	CS_OFFL_SIR_IOPM_2_20210221T040835_20210221T041350_C001		
and Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have been attempted Range and Backscatter Quality Flags have been set for one or more records.  CS OFFL SIR IOPM 2 20210221T051251 20210221T051254 C001  CS OFFL SIR IOPM 2 20210221T051912 20210221T052754 C001  CS OFFL SIR IOPM 2 20210221T054066 C001  CS OFFL SIR IOPM 2 20210221T054001 20210221T054066 C001  CS OFFL SIR IOPM 2 20210221T060137 20210221T060254 C001  CS OFFL SIR IOPM 2 20210221T060137 20210221T060254 C001  CS OFFL SIR IOPM 2 20210221T06041 20210221T060254 C001  CS OFFL SIR IOPM 2 20210221T070212 20210221T070212 C0010221T060336 C001  CS OFFL SIR IOPM 2 20210221T070212 20210221T070212 C0010221T070212 C0010221T070222 C0010221T070222 C0010221T070221 C0010221T070222 C0010221T07022	CS_OFFL_SIR_IOPM_2_20210221T042359_20210221T043732_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_IOPM_2_20210221T051912_20210221T052754_C001  CS_OFFL_SIR_IOPM_2_20210221T051912_20210221T054606_C001  CS_OFFL_SIR_IOPM_2_20210221T053112_20210221T054606_C001  CS_OFFL_SIR_IOPM_2_20210221T053112_20210221T054606_C001  CS_OFFL_SIR_IOPM_2_20210221T053112_20210221T054606_C001  CS_OFFL_SIR_IOPM_2_20210221T053112_20210221T055302_C001  CS_OFFL_SIR_IOPM_2_20210221T054801_20210221T055302_C001  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060411_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061236_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061236_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061236_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061236_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T061236_C001  CS_OFFL_SIR_IOPM_2_20210221T06041_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_2021022	CS_OFFL_SIR_IOPM_2_20210221T044121_20210221T045112_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
And Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have been Altimeter Range Quality COCG Altimeter Range Quality COCG Altimeter Range Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T054801_20210221T055302_C001  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072320_C001  CS_OFFL_SIR_IOPM_2_20210221T072834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T072834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073846_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073846_2021	CS_OFFL_SIR_IOPM_2_20210221T051251_20210221T051254_C001		
GS_OFFL_SIR_IOPM_2_20210221T054801_20210221T054606_C001  Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been gackscatter Quality. OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T07320_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T0702020_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T0702020_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T0702020_C001  CS_OFFL_SIR_IOPM_2_20210221T0702012_20210221T0702020_C001  CS_OFFL_SIR_IOPM_2_20210221T0702012_20010221T070200	CS_OFFL_SIR_IOPM_2_20210221T051912_20210221T052754_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T060254_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T078806_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T08006_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T08006_20210221T08	CS_OFFL_SIR_IOPM_2_20210221T053112_20210221T054606_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073836_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCOGG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPM_2_20210221T054801_20210221T055302_C001		
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T062326_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  And Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  And Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T080407_C001  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083010_C001  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPM_2_20210221T060137_20210221T060254_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001  CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T080407_C001  CS_OFFL_SIR_I	CS_OFFL_SIR_IOPM_2_20210221T060641_20210221T061429_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T073220_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Plags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T072834_20210221T073220_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T080407_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001  CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001	CS_OFFL_SIR_IOPM_2_20210221T061837_20210221T062326_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality, OCOG  OCOG Altimeter Range Quality, OCOG  The OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality Flags have been set OCOG Altimeter Range and Backscatter Quality Flags have been set	CS_OFFL_SIR_IOPM_2_20210221T070212_20210221T072519_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range and Backscatter Quality Flags have been set occurred by the ocog Altimeter Range	CS_OFFL_SIR_IOPM_2_20210221T072834_20210221T073220_C001		
US OFFI SIR IOPM / 20200201008026 20200221083500 C001	CS_OFFL_SIR_IOPM_2_20210221T073826_20210221T080407_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
	CS_OFFL_SIR_IOPM_2_20210221T083026_20210221T083510_C001		

CS_OFFL_SIR_IOPM_2_20210221T083906_20210221T090446_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_20210221T090616_20210221T091134_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_20210221T091141_20210221T091508_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_20210221T091753_20210221T095140_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_20210221T102414_20210221T102440_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_20210221T102442_20210221T103404_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_20210221T103807_20210221T104437_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_20210221T104618_20210221T105412_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_20210221T105718_20210221T113115_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_20210221T114504_20210221T114549_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_20210221T115707_20210221T115804_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_20210221T121139_20210221T122423_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_20210221T122550_20210221T123103_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_20210221T123625_20210221T125509_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_20210221T130717_20210221T131134_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_20210221T131240_20210221T131342_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_20210221T132306_20210221T132340_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_20210221T132451_20210221T132547_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_20210221T134200_20210221T134809_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_20210221T134953_20210221T140327_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_20210221T141614_20210221T144759_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_20210221T145304_20210221T145339_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210221T150552_20210221T152514_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_20210221T152517_20210221T153749_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_20210221T155109_20210221T155418_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_20210221T155544_20210221T161141_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.

COURT BY O'N 2 2012/11/19/20 2012/11/19/20 2012  COURT BY O'N 2 2012/11/20/20 2012/11/20/20 DOI  COURT BY O'N 2 2012/11/20/20 DOI  COURT BY O'N 2 2012/11/20/20 2011/20/20/20/20  COURT BY O'N 2 2012/11/20/20 2012/11/20/20 DOI  COURT BY O'N 2 2012/11/20/20 2012/11/20/20 D	CS_OFFL_SIR_IOPM_2_20210221T161345_20210221T162408_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.
### CODD AT PACKETION PROPOSITION SERVICE THE PACKET CODD AT PACKETION PROPOSITION OF THE PACKET CODD AT PACKET PROPOSITION SERVICE THE PACKET CODD AT PACKET PR	CS_OFFL_SIR_IOPM_2_20210221T164112_20210221T164316_C001		
Best Control	CS_OFFL_SIR_IOPM_2_20210221T165034_20210221T170220_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Bescenter Clustry   See 1 and 1 more accords.  CE_OPT_SRIP_OPM_2_2221022**   17754-4   2021027**   17754-4   2	CS_OFFL_SIR_IOPM_2_20210221T172550_20210221T172835_C001		, ,
Dec. OFF., SIR (CPV. 2.227/02/1173/43 2/3 (2012/11/23/24 CO)  Dec. OFF., SIR (CPV. 2.227/02/1173/43 2/3 (2012/11/23/24 CO)  Dec. OFF., SIR (CPV. 2.227/02/11/23/24 CO)  Dec. OFF., SIR (CPV. 2.227/02/	CS_OFFL_SIR_IOPM_2_20210221T172850_20210221T173320_C001		
CB. OFF., SIR. JOPA. 2. 2021 (2021 116031 2.002 (20	CS_OFFL_SIR_IOPM_2_20210221T173514_20210221T175008_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Sead-sector Custly	CS_OFFL_SIR_IOPM_2_20210221T175148_20210221T175431_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C2_OFFL_SR_IOPN_2_20212271190347_20212271190247_C0001	CS_OFFL_SIR_IOPM_2_20210221T180303_20210221T180541_C001		
Backscater Caulty  CS OFFL SIR JOPM 2 20210221719434 20210221719357 COOI  SOFFL SIR JOPM 2 20210221720430 20210221720402 COOI  Amender Ronge SSHA, SVH and Bouccaster Caulty, OCOO Amender Ronge SSHA, SVH and Bouccaster Caulty and Bouccaster Caul	CS_OFFL_SIR_IOPM_2_20210221T183710_20210221T190124_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and feadscater Ouality, OCOD Altrineter Range and Beadscater Ouality, Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and Beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for own from rounding and beadscater Ouality Plags have been set for ow	CS_OFFL_SIR_IOPM_2_20210221T190347_20210221T191227_C001		
and Buccaster Outling, OCID Allmeter Range and Buckscarter Outling Flags have been all formation and an advantage of the Corp. Allmeter Range and Buckscarter Outling Flags have been as for one or or one records.  CS_OFFL_SR_IOPM_2_20210221720603_20210221721004_C001  CS_OFFL_SR_IOPM_2_20210221720603_20210221721004_C001  CS_OFFL_SR_IOPM_2_20210221720603_20210221721004_C001  CS_OFFL_SR_IOPM_2_20210221724703_20210221721004_C001  CS_OFFL_SR_IOPM_2_20210221724703_202102217221004_C001  CS_OFFL_SR_IOPM_2_20210221722057_202102217221004_C001  CS_OFFL_SR_IOPM_2_20210221722057_202102217221004_C001  CS_OFFL_SR_IOPM_2_20210221722057_20210221722104_C001  CS_OFFL_SR_IOPM_2_20210221722057_20210221722067_C001  CS_OFFL_SR_IOPM_2_20210221722024_C001201722067_C001  CS_OFFL_SR_IOPM_2_20210221722024_C001201722067_C001  CS_OFFL_SR_IOPM_2_20210221722024_C001201722067_C001  CS_OFFL_SR_IOPM_2_20210221722024_C001201722067_C001  CS_OFFL_SR_IOPM_2_20210221722004_C00120172067_C0010017067_C00100	CS_OFFL_SIR_IOPM_2_20210221T191434_20210221T193957_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscater Quality  CS_OFFL_SIR_IOPM_2_20210221T205315_20210221T21004_C001  CS_OFFL_SIR_IOPM_2_20210221T215515_20210221T221929_C001  CS_OFFL_SIR_IOPM_2_20210221T21577_20210221T221929_C001  CS_OFFL_SIR_IOPM_2_20210221T222577_20210221T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_20210221T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_20210221T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T20524_2021T22305_C001  CS_OFFL_SIR_IOPM_2_20210221T20525_2021122305_C001  CS_OFFL_SIR_IOPM_2_20210221T20525_202112231010_2021T205355_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_2021T23055_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_2021T23055_C001  CS_OFFL_SIR_IOPM_2_20210221T2305_2021T23555_C001  CS_OFFL_SIR_IOPM_2_20210221T2305_2021T23555_C001  CS_OFFL_SIR_IOPM_2_20210221T2305_2021T25555_C001  CS_OFFL_SIR_IOPM_2_20210221T15505_20_C001	CS_OFFL_SIR_IOPM_2_20210221T201343_20210221T204022_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality. COCG Altimeter Range and Backscatter Quality Flags have been and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range. SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range. SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221722324_022102217223847_C001  CS_OFFL_SIR_IOPM_2_20210221722324_022102217223847_C001  CS_OFFL_SIR_IOPM_2_2021022172304_202102217224932_C001  CS_OFFL_SIR_IOPM_2_2021022172304_202102217234932_C001  CS_OFFL_SIR_IOPM_2_20210221723100_202102217234932_C001  CS_OFFL_SIR_IOPM_2_20210221723100_202102217235854_C001  CS_OFFL_SIR_IOPM_2_20210221723357_202102217238554_C001  CS_OFFL_SIR_IOPM_2_20210221733357_20210221723355_C001  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217150109_20210221715030_C001  Altimeter Range and Backscatter Quality. COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217073236_202102217073241_C001  CS_OFFL_SIR_IOPM_2_202102217150109_20210221715030_C001  Altimeter Range Quality, COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_202102217150109_20210221715030_C001  CS_OFFL_SIR_IOPM_2_202102217150109_202102217190347_C001  CS_OFFL_SIR_IOPM_2_202102217150109_202102217190347_C001  CS_OFFL_SIR_IOPM_2_2021022171903351_202102217190347_C001  CS_OFFL_SIR_IOPM_2_2021022171903351_202102217190347	CS_OFFL_SIR_IOPM_2_20210221T204603_20210221T205023_C001		
and Backscatter Quality COCG Altimeter Range and Backscatter Quality Salo from or more records.  CS_OFFL_SIR_IOPM_2_20210221T22324_20210221T223104_C001  CS_OFFL_SIR_IOPM_2_20210221T22324_20210221T223847_C001  CS_OFFL_SIR_IOPM_2_20210221T22324_20210221T233847_C001  CS_OFFL_SIR_IOPM_2_20210221T22324_20210221T223847_C001  CS_OFFL_SIR_IOPM_2_20210221T22324_20210221T223847_C001  CS_OFFL_SIR_IOPM_2_20210221T223304_20210221T224932_C001  CS_OFFL_SIR_IOPM_2_20210221T23304_20210221T224932_C001  CS_OFFL_SIR_IOPM_2_20210221T233056_C001  CS_OFFL_SIR_IOPM_2_20210221T233557_20210221T235854_C001  CS_OFFL_SIR_IOPM_2_20210221T332357_20210221T335854_C001  CS_OFFL_SIR_IOPM_2_20210221T03335_20210221T033241_C001  CS_OFFL_SIR_IOPM_2_20210221T03335_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T150199_20210221T15002_C001  CS_OFFL_SIR_IOPM_2_20210221T150199_20210221T15002_C001  CS_OFFL_SIR_IOPM_2_20210221T150199_20210221T150002_C001  CCG_Altimeter Range Quality, OCCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T150199_20210221T150002_C001  CCG_Altimeter Range Quality, OCCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T150002_20210221T150002_C001  CCG_Altimeter Range Quality, OCCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CC_OFFL_SIR_IOPM_2_20210221T150002_20210221T150002_C001  CCG_Altimeter Range Quality, OCCG_Altimeter Range and Backscatter Quality Fla	CS_OFFL_SIR_IOPM_2_20210221T205315_20210221T212004_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS OFFL SIR IOPM 2 20210221T22324 20210221T223847 CO01  CS OFFL SIR IOPM 2 20210221T223224 20210221T223847 CO01  CS OFFL SIR IOPM 2 20210221T223224 20210221T223847 CO01  CS OFFL SIR IOPM 2 20210221T224304 20210221T224932 CO01  CS OFFL SIR IOPM 2 20210221T224304 20210221T224932 CO01  CS OFFL SIR IOPM 2 20210221T231010_20210221T231056_CO01  CS OFFL SIR IOPM 2 20210221T23037 20210221T23056 CO01  CS OFFL SIR IOPM 2 20210221T23337 20210221T235854 CO01  CS OFFL SIR IOPM 2 20210221T033235 20210221T033241_CO01  CS OFFL SIR IOPM 2 20210221T150325 20210221T15503_CO01  CS OFFL SIR IOPM 2 20210221T15092 20210221T15503_CO01  CS OFFL SIR IOPM 2 20210221T15092 20210221T15050 CO01  CS OFFL SIR IOPM 2 20210221T15092 20210221T103247 CO01  CS OFFL SIR IOPM 2 20210221T15092 20210221T103247 CO01  CS OFFL SIR IOPM 2 20210221T15009 20210221T10327 CO01  CS OFFL SIR IOPM 2 20210221T15009 20210221T10327 CO01  CS OFFL SIR IOPM 2 20210221T15009 20210221T1002635_CO01  CS OFFL SIR IOPM 2 20210221T1002351_20210221T1002635_CO01  CS OFFL SIR IOPM 2 20210221T1002351_20210221T1	CS_OFFL_SIR_IOPM_2_20210221T214703_20210221T221929_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
And Backscatter Quality, COG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T224304_20210221T224332_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T23432_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T231056_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T231056_C001  CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T23554_C001  CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T235554_C001  CS_OFFL_SIR_IOPM_2_20210221T03235_20210221T03241_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T03241_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPM_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPM_2_20210221T150109_20210221T190347_C001  CCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality COG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPN_2_20210221T1022351_20210221T190347_C001  CCOG Altimeter Range And Backscatter Quality COG Altimeter	CS_OFFL_SIR_IOPM_2_20210221T222517_20210221T223104_C001		
and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T231056_C001  CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T231056_C001  CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T235854_C001  CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T235854_C001  CS_OFFL_SIR_IOPM_2_20210221T073235_20210221T073241_C001  CS_OFFL_SIR_IOPM_2_20210221T073235_20210221T073241_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPM_2_20210221T15418_20210221T150502_C001  CS_OFFL_SIR_IOPM_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPM_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T1002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T1002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T002351_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IOPM_2_20210221T190347_C001  CS_OFFL_SIR_IO	CS_OFFL_SIR_IOPM_2_20210221T223224_20210221T223847_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T235854_C001  CS_OFFL_SIR_IOPN_2_20210221T073235_20210221T073241_C001  CS_OFFL_SIR_IOPN_2_20210221T073235_20210221T073241_C001  CS_OFFL_SIR_IOPN_2_20210221T15418_20210221T073241_C001  CS_OFFL_SIR_IOPN_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T15503_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T1002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CCOG Altimeter Range Quality, OCOG Backscatter Quality  CCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Altimeter Range Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CCOG Altimeter Range Altim	CS_OFFL_SIR_IOPM_2_20210221T224304_20210221T224932_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been Set for one or more records.  CS_OFFL_SIR_IOPN_2_20210221T073235_20210221T073241_C001  CS_OFFL_SIR_IOPN_2_20210221T15418_20210221T15503_C001  CS_OFFL_SIR_IOPN_2_20210221T15418_20210221T115503_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T15502_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T1002051_20210221T1002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFF	CS_OFFL_SIR_IOPM_2_20210221T231010_20210221T231056_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  CS_OFFL_SIR_IOPN_2_20210221T115418_20210221T115503_C001  CS_OFFL_SIR_IOPN_2_20210221T115418_20210221T115503_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPR_2_20210221T1002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001	CS_OFFL_SIR_IOPM_2_20210221T232357_20210221T235854_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20210221T115418_20210221T115503_C001  and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPR_2_20210221T1002351_20210221T002635_C001  CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001  And Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.  CS_OFFL_SIR_IOPR_2_20210221T1002351_20210221T002635_C001  OCEAN Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPN_2_20210221T073235_20210221T073241_C001		
CS_OFFL_SIR_IOPN_2_20210221T150109_20210221T150502_C001  Backscatter Quality  CS_OFFL_SIR_IOPN_2_20210221T150109_2024_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001  CS_OFFL_SIR_IOPN_2_20210221T002351_20210221T002635_C001  CS_OFFL_SIR_IOPN_2_20210221T002635_C001  CS_OFFL_SIR_IOPN_2_20210221T002635_C001	CS_OFFL_SIR_IOPN_2_20210221T115418_20210221T115503_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality  Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.  The Ocean Altimeter Range, SSHA, SWH 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_20210221T150109_20210221T150502_C001		
CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality set for one or more records.	CS_OFFL_SIR_IOPN_2_20210221T190204_20210221T190347_C001		
Occasion Albimostas Demando COLLA CANILL The Occasion Albimostas Demando Collaboration	CS_OFFL_SIR_IOPR_2_20210221T002351_20210221T002635_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20210221T022740_20210221T022804_C001  Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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_20210221T022740_20210221T022804_C001	and Backscatter Quality, OCOG	, ,

CS_OFFL_SIR_IOPR_2_20210221T050200_20210221T050844_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_20210221T070108_20210221T070212_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_20210221T114857_20210221T115033_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_20210221T140327_20210221T140430_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_20210221T191407_20210221T191434_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

## L2 Quality Flags (20Hz PLRM)

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

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

Number of products with errors: 100

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20210221T001111_20210221T001444_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_20210221T010005_20210221T010129_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_20210221T012143_20210221T012508_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_20210221T014104_20210221T014343_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_20210221T031735_20210221T031839_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_20210221T040658_20210221T040835_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_20210221T045641_20210221T045737_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_20210221T045945_20210221T050200_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_20210221T051628_20210221T051912_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_20210221T060254_20210221T060641_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_20210221T061429_20210221T061837_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_20210221T063156_20210221T063318_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_20210221T063530_20210221T064033_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_20210221T064555_20210221T064612_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_20210221T065633_20210221T070033_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_20210221T072519_20210221T072834_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_20210221T073529_20210221T073740_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_20210221T080721_20210221T080933_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_20210221T081319_20210221T081856_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_20210221T083510_20210221T083637_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_20210221T083816_20210221T083906_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_20210221T091135_20210221T091141_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_20210221T095141_20210221T095555_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_20210221T100335_20210221T100411_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_20210221T104453_20210221T104617_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_20210221T113315_20210221T113515_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_20210221T114733_20210221T114856_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_20210221T120129_20210221T120314_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_20210221T120621_20210221T120654_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_20210221T122423_20210221T122549_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_20210221T150109_20210221T150502_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_20210221T154443_20210221T154718_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_20210221T155419_20210221T155544_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_20210221T162408_20210221T162659_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_20210221T164316_20210221T164558_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_20210221T171802_20210221T171823_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_20210221T171943_20210221T172550_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_20210221T173320_20210221T173502_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_20210221T181924_20210221T182140_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_20210221T182228_20210221T182456_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_20210221T183547_20210221T183710_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_20210221T190204_20210221T190347_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_20210221T194304_20210221T194419_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_20210221T195423_20210221T195442_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_20210221T195850_20210221T200334_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_20210221T200424_20210221T200545_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_20210221T201037_20210221T201146_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_20210221T222127_20210221T222516_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_20210221T224933_20210221T225128_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_20210221T225624_20210221T225730_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_20210221T230239_20210221T230310_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_20210221T230929_20210221T231010_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_20210221T232229_20210221T232357_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_20210221T000235_20210221T001110_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_20210221T010129_20210221T010133_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_20210221T013218_20210221T013552_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_20210221T013552_20210221T014104_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_20210221T014343_20210221T015126_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_20210221T032245_20210221T032959_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_20210221T033228_20210221T033718_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_20210221T041804_20210221T042359_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_20210221T043733_20210221T043837_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_20210221T043840_20210221T043946_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_20210221T043959_20210221T044121_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_20210221T045112_20210221T045312_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_20210221T045332_20210221T045641_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_20210221T045738_20210221T045915_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_20210221T050200_20210221T050844_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_20210221T063318_20210221T063530_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_20210221T064033_20210221T064555_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_20210221T064612_20210221T064701_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_20210221T070108_20210221T070212_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_20210221T081857_20210221T082319_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_20210221T082319_20210221T082816_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_20210221T091632_20210221T091753_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_20210221T095556_20210221T100335_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_20210221T100626_20210221T100831_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_20210221T113515_20210221T114158_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_20210221T114158_20210221T114504_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_20210221T131342_20210221T132058_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_20210221T132548_20210221T133250_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_20210221T133436_20210221T133505_C001	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_20210221T145521_20210221T145955_C001	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_20210221T145955_20210221T150108_C001	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_20210221T153749_20210221T154443_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_20210221T161141_20210221T161344_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_20210221T163325_20210221T163831_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_IOPR_2_20210221T170220_20210221T170432_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_20210221T173502_20210221T173514_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_20210221T181502_20210221T181924_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_20210221T182456_20210221T182714_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_20210221T183427_20210221T183547_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_20210221T194419_20210221T194452_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_20210221T195049_20210221T195312_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_20210221T195442_20210221T195850_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_20210221T212347_20210221T212424_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 OFFI SIR IOPR 2 20210221T212008 20210221T213030 C001	Latimatar Ranga and Backscattar ( )Liality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
- US OFFE SIR IOPR / /0/10//11//5803 /0/10//11/30044 COOT	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
LS OFFE SIR IOPR / /0/10//11/3013/ /0/10//11/30/39 C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20210221T231245_20210221T232032_C001	LAITIMETER RANGE AND BACKSCATTER CHAILTV	The Ocean Altimeter 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.

146

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

**Number of products with errors:** 192

## **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:** 59

#### 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:** 

## 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:** 

### **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:** 

## 6.3 P2P Auxiliary Data File Usage Check

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

**Number of products with errors:** 

## **6.4 P2P Auxiliary Correction Error Check**

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

0

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > 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_220210220T231613_20210221T000550_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210221T000550_20210221T005528_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_220210221T005528_20210221T014505_C001		Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOP_220210221T014505_20210221T023442_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_220210221T023442_20210221T032419_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_220210221T032419_20210221T041357_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_220210221T041357_20210221T050334_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FFS) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records

CS_OFFL_SIR_IOP_220210221T050334_20210221T055311_C001	Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
00_011	Topography (1) Iviean Sea Surrace (1), Iviean Dynamic	Topography height (solution 1)
CS_OFFL_SIR_IOP_220210221T055311_20210221T064249_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220210221T064249_20210221T073226_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_220210221T073226_20210221T082203_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_220210221T082203_20210221T091141_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_220210221T091141_20210221T100118_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_220210221T100118_20210221T105056_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_220210221T105056_20210221T114033_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_220210221T114033_20210221T123010_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_220210221T123010_20210221T131947_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_220210221T131947_20210221T140925_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_220210221T140925_20210221T145902_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_220210221T145902_20210221T154839_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_220210221T154839_20210221T163817_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_220210221T163817_20210221T172754_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_220210221T172754_20210221T181731_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_220210221T181731_20210221T190709_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_220210221T190709_20210221T195646_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_220210221T195646_20210221T204624_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_220210221T213601_20210221T222538_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_220210221T222538_20210221T231515_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_220210221T231515_20210222T000453_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

## **6.5 P2P Measurement Confidence Data Check**

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

Number of products with errors:

# 6.6 P2P Measurement Quality Flag Check

## P2P Quality Flags (20Hz)

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

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

Number of products with errors: 29

## 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: 27

### 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:

0

## 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.

26

29

Number of products with errors:

#### P2P Retracking Flags PLRM

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

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

Number of products with errors:

# 7. OP QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	177	177	4	173	0
SIR_IOPR1B	119	101	4	97	0
SIR_IOPN1B	101	119	0	119	0
SIR_IOPM_2	177	177	126	51	0
SIR_IOPR_2	119	101	42	59	0
SIR_IOPN_2	101	119	36	82	1
SIR IOP P2P	28	28	0	27	1

### 7.1 QCC Errors

**Number of QCC reports with errors:** 

8

Total number of occurrences of each error

Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_IOPR_2	1	1	1	1							
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-

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

## 7.2 QCC Warnings

SIR\_IOP\_2\_

Number of QCC reports with warnings

2085

Total number of occurrences of each warning

				or or obournoned or ou			
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_IOPM1B	173	0	0	0	0	0	0
SIR_IOPM_2	0	0	38	39	1	37	0
SIR_IOPN1B	97	0	0	0	0	0	0
SIR_IOPN_2	0	0	8	33	5	24	25
SIR_IOPR1B	113	0	0	0	0	0	0
SIR_IOPR_2	0	1	22	39	1	26	22

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	34	1	31	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	19	0	0	0	27	0	34
SIR_IOPR1B	0	0	0	0	0	0	0
SIR IOPR 2	12	0	0	38	0	48	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	22	0	0	2	21	0	1
SIR_IOPN1B	0	0	0	0	0	0	0
<del>-</del>		0	24	4.4	45	52	0
SIR_IOPN_2	0	0	31	14	45	52	27
SIR_IOPR1B	0	0	0	0	0	0	0
SIR IOPR 2	0	38	0	6	61	37	16

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_IOPM1B	0	0	0	0	0	0	
SIR_IOPM_2	37	0	1	0	0	0	
SIR_IOPN1B	0	0	0	0	47	2	
SIR_IOPN_2	30	30	13	1	0	0	
SIR_IOPR1B	0	0	0	0	119	11	
SIR IOPR 2	28	43	3	6	0	0	

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_IOP_2_	17	28	28	6	28	18	27
Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	•	•
SIR_IOP_2_	24	28	18	15	28		

Test Description Key:							
Abbreviation	Test name	Details					
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter					
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)					
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					

MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

## 7.3 Missing QCC Reports

Number of products with missing QCC reports: