

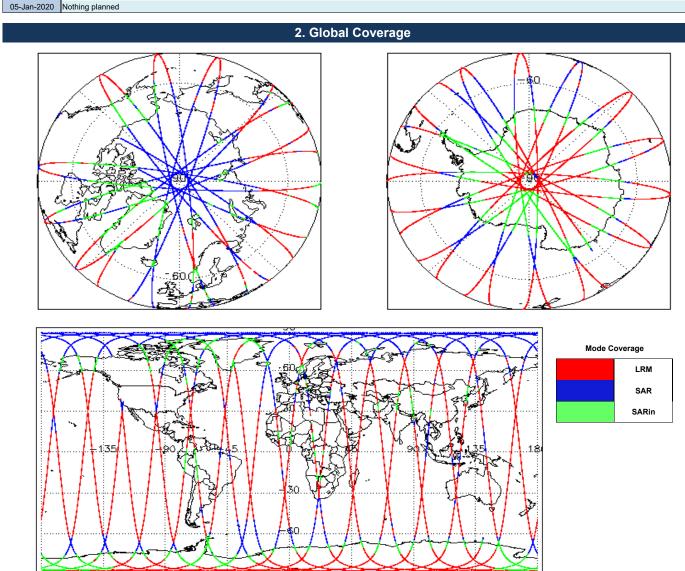
# **QA4EO Daily Report for IOP data:**

<u>04/01/2020</u>

Demont Draduction.	07-Jan-2020	Check	L1 & L2	P2P
Report Production:	07-Jan-2020	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:		Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Usea:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Intermediate Ocean Products (IOP)	Product Format Check	Nominal	Nominal
Data Used:	L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
	·	Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7

1. Overview

	Wission / Instrument News			
03-Jan-2020		None		
	04-Jan-2020	None		
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## 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).

Number of products with errors:

0

4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and	d SPH in order to identify any inc	onsistencies and/or errors raised by the ground-segment processing chain.
_1B Processing Quality HR: The 11b_proc_flag_hr flag is currently set all L11 DSARIn chains. A modification is required in the next release.	B IOPR and IOPN products beca	use the I1b_processing_quality_hr field is not correctly configured in the OSAR and
Number of products with errors: 0		
4.3 L1B Auxilary Data File Usage Check		
Each product is checked for missing Data Set Descriptors with respect to a pro	e-determined baseline and also to	o check the validity of Auxiliary Data Files is correct.
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag for each measurement recor	rd. The bit value of this flag indica	tes any problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measurer	ment record. The bit value of this	flag indicates any problems when set.
Attitude Correction Missing: This flag is currently set in error for IOPR produ		
lumber of products with errors: 0	<u>-</u>	······································
CryoSat L1B data includes a waveform data flag for each measurement record	d. The bit value of this flag indicat	es any problems when set.
Loss of Echo Flag: This flag is currently set for products over land, but this is	-	es any problems when set.
Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 18	-	es any problems when set.  Description
Loss of Echo Flag: This flag is currently set for products over land, but this is         Jumber of products with errors:       18         Product	s to be expected.	
Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       18         Product       CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001	to be expected.	Description
coss of Echo Flag: This flag is currently set for products over land, but this is         Jumber of products with errors:       18         Product	Test Failed	Description           The tracking echo is missing for one or more records
Loss of Echo Flag: This flag is currently set for products over land, but this is         Number of products with errors:       18         Product       18         CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001       1000000000000000000000000000000000000	to be expected.  Test Failed Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         1000000000000000000000000000000000000	Test Failed Loss of Echo Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         100           CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         100           CS_OFFL_SIR_IOPM1B_20200104T220632_20200104T221119_C001         100           CS_OFFL_SIR_IOPN1B_20200104T000950_20200104T001134_C001         100           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005336_C001         100	Test Failed Loss of Echo Loss of Echo Loss of Echo Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Coss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         20           CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         20           CS_OFFL_SIR_IOPM1B_20200104T220632_20200104T221119_C001         20           CS_OFFL_SIR_IOPN1B_20200104T00950_20200104T001134_C001         20           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005336_C001         20           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005525_C001         20	to be expected.           Test Failed           Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Australia         State	to be expected.	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Access of Echo Flag: This flag is currently set for products over land, but this is           Iumber of products with errors:         18           Product         18           SS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         33           SS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         33           SS_OFFL_SIR_IOPM1B_20200104T220632_20200104T221119_C001         33           SS_OFFL_SIR_IOPN1B_20200104T00950_20200104T001134_C001         33           SS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005336_C001         33           SS_OFFL_SIR_IOPN1B_20200104T005358_20200104T005525_C001         33           SS_OFFL_SIR_IOPN1B_20200104T015113_20200104T015428_C001         33           SS_OFFL_SIR_IOPN1B_20200104T022958_20200104T015428_C001         33	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Access of Echo Flag: This flag is currently set for products over land, but this is sumber of products with errors:         18           Product         18           S2_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         25           COFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         25           CS_OFFL_SIR_IOPM1B_20200104T220632_20200104T221119_C001         25           CS_OFFL_SIR_IOPN1B_20200104T000950_20200104T001134_C001         25           COFFL_SIR_IOPN1B_20200104T004936_20200104T005356_C001         25           CS_OFFL_SIR_IOPN1B_20200104T005358_20200104T005525_C001         25           COFFL_SIR_IOPN1B_20200104T015113_20200104T015428_C001         25           COFFL_SIR_IOPN1B_20200104T022958_20200104T023310_C001         25           COFFL_SIR_IOPN1B_20200104T021548_20200104T091641_C001         26	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Access of Echo Flag: This flag is currently set for products over land, but this is lumber of products with errors:         18           Product         18           S2_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         35           S3_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         35           S2_OFFL_SIR_IOPM1B_20200104T220632_20200104T221119_C001         35           S3_OFFL_SIR_IOPN1B_20200104T00950_20200104T001134_C001         35           S3_OFFL_SIR_IOPN1B_20200104T004936_20200104T005356_C001         35           S3_OFFL_SIR_IOPN1B_20200104T05358_20200104T005525_C001         35           S3_OFFL_SIR_IOPN1B_20200104T05113_20200104T015428_C001         35           S3_OFFL_SIR_IOPN1B_20200104T022958_20200104T023310_C001         35           S3_OFFL_SIR_IOPN1B_20200104T091548_20200104T091641_C001         35           S3_OFFL_SIR_IOPN1B_20200104T155146_20200104T155638_C001         35	Test Failed         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001           CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         CS_OFFL_SIR_IOPM1B_20200104T00950_20200104T001134_C001           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005336_C001         CS_OFFL_SIR_IOPN1B_20200104T005358_20200104T005525_C001           CS_OFFL_SIR_IOPN1B_20200104T015113_20200104T015428_C001         CS_OFFL_SIR_IOPN1B_20200104T015148_20200104T015438_C001           CS_OFFL_SIR_IOPN1B_20200104T091548_20200104T091641_C001         CS_OFFL_SIR_IOPN1B_20200104T155146_20200104T155638_C001           CS_OFFL_SIR_IOPN1B_20200104T164515_0200104T164613_C001         CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T164613_C001	Test Failed         Loss of Echo         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement recorr           Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         10           CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         10           CS_OFFL_SIR_IOPM1B_20200104T00950_20200104T001134_C001         10           CS_OFFL_SIR_IOPN1B_20200104T00950_20200104T005336_C001         10           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005352_C001         10           CS_OFFL_SIR_IOPN1B_20200104T015133_20200104T005525_C001         10           CS_OFFL_SIR_IOPN1B_20200104T015133_20200104T015428_C001         10           CS_OFFL_SIR_IOPN1B_20200104T015148_20200104T091548_20200104T091641_C001         10           CS_OFFL_SIR_IOPN1B_20200104T155146_20200104T155638_C001         10           CS_OFFL_SIR_IOPN1B_20200104T155146_20200104T156638_C001         10           CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T164613_C001         10           CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T222529_C001         10           CS_OFFL_SIR_IOPN1B_20200104T02226_20200104T001830_C001         10	to be expected.	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records
Loss of Echo Flag: This flag is currently set for products over land, but this is           Number of products with errors:         18           Product         18           CS_OFFL_SIR_IOPM1B_20200104T143929_20200104T145403_C001         CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001           CS_OFFL_SIR_IOPM1B_20200104T190219_20200104T190424_C001         CS_OFFL_SIR_IOPM1B_20200104T00950_20200104T001134_C001           CS_OFFL_SIR_IOPN1B_20200104T004936_20200104T005336_C001         CS_OFFL_SIR_IOPN1B_20200104T005358_20200104T005525_C001           CS_OFFL_SIR_IOPN1B_20200104T015113_20200104T015428_C001         CS_OFFL_SIR_IOPN1B_20200104T015113_20200104T015428_C001           CS_OFFL_SIR_IOPN1B_20200104T091548_20200104T091641_C001         CS_OFFL_SIR_IOPN1B_20200104T015548_20200104T091641_C001           CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T164613_C001         CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T164613_C001           CS_OFFL_SIR_IOPN1B_20200104T164359_20200104T164613_C001         CS_OFFL_SIR_IOPN1B_20200104T164259_20200104T164613_C001	Test Failed         Loss of Echo         Loss of Echo	Description           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records           The tracking echo is missing for one or more records

## 5. IOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

The tracking echo is missing for one or more records

### 5.1 L2 Product Format Check

CS\_OFFL\_SIR\_IOPR1B\_20200104T190558\_20200104T191401\_C001

CS\_OFFL\_SIR\_IOPR1B\_20200104T195039\_20200104T195420\_C001

CS\_OFFL\_SIR\_IOPR1B\_20200104T203142\_20200104T203536\_C001

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

## 5.2 L2 Product Header Analysis

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

Loss of Echo

Loss of Echo

Loss of Echo

## 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:
0

### 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.

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20200104T004936_20200104T005336_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_20200104T005358_20200104T005525_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_20200104T014813_20200104T015052_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_20200104T015113_20200104T015428_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20200104T022958_20200104T023310_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_20200104T023310_20200104T023416_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_20200104T032728_20200104T033051_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_20200104T040848_20200104T041238_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_20200104T050832_20200104T050946_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_20200104T063750_20200104T063914_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_20200104T064736_20200104T064856_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_20200104T072529_20200104T072614_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_20200104T074611_20200104T074627_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_20200104T081737_20200104T081903_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_20200104T082428_20200104T082739_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_20200104T095716_20200104T095831_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_20200104T100326_20200104T100651_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_20200104T113802_20200104T114038_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_20200104T114231_20200104T114858_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_20200104T123312_20200104T123433_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20200104T131321_20200104T131929_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_20200104T141233_20200104T141404_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_20200104T150547_20200104T150735_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_20200104T155146_20200104T155638_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_20200104T172434_20200104T172509_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_20200104T181617_20200104T181829_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20200104T195420_20200104T195736_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_20200104T213308_20200104T213627_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_20200104T214152_20200104T214317_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_20200104T222226_20200104T222529_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20200104T232005_20200104T232142_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_20200104T005525_20200104T010045_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_20200104T023416_20200104T024115_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_20200104T041238_20200104T041753_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_20200104T054930_20200104T055826_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_20200104T072857_20200104T073803_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_20200104T074010_20200104T074218_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_20200104T074553_20200104T074610_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_20200104T074627_20200104T074742_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_20200104T090452_20200104T091418_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_20200104T091419_20200104T091547_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_20200104T104637_20200104T105317_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_20200104T105318_20200104T105851_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_20200104T122604_20200104T123139_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_20200104T123139_20200104T123312_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_20200104T125534_20200104T125747_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPR_2_20200104T140551_20200104T140735_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_IOPR_2_20200104T140812_20200104T140953_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_20200104T140953_20200104T141232_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_20200104T142104_20200104T142252_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_20200104T154432_20200104T154532_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20200104T154532_20200104T155145_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_20200104T172658_20200104T173207_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_20200104T185456_20200104T185656_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_20200104T190028_20200104T190219_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_20200104T190558_20200104T191401_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_20200104T204433_20200104T205315_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_20200104T222529_20200104T223317_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. 0

## 5.6 L2 Measurement Quality Flag Check

## L2 Quality Flags (20Hz)

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

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20200104T000158_20200104T000719_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_20200104T001830_20200104T003055_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_20200104T003231_20200104T004124_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_20200104T004250_20200104T004936_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_20200104T010305_20200104T010308_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_20200104T011137_20200104T012153_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_20200104T012356_20200104T012542_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_20200104T012700_20200104T013132_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_20200104T013230_20200104T013853_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_20200104T014124_20200104T014619_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_20200104T015428_20200104T015834_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_20200104T020436_20200104T020446_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_20200104T021222_20200104T022151_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_20200104T030242_20200104T031815_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_20200104T032102_20200104T032547_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_20200104T033220_20200104T035856_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_20200104T043200_20200104T045724_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_20200104T050050_20200104T050446_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_20200104T050451_20200104T050500_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_20200104T050507_20200104T050832_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_20200104T051154_20200104T053829_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_20200104T060113_20200104T063615_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_20200104T063914_20200104T064400_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_20200104T064405_20200104T064735_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_20200104T065230_20200104T072528_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_20200104T073804_20200104T074010_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_20200104T074743_20200104T074817_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_20200104T080429_20200104T080810_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_20200104T081009_20200104T081212_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_20200104T081412_20200104T081428_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_20200104T081904_20200104T082427_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_20200104T083103_20200104T085234_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_20200104T085520_20200104T090451_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_20200104T091648_20200104T092025_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_20200104T093633_20200104T095342_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_20200104T101003_20200104T104303_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_20200104T110459_20200104T110717_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_20200104T110805_20200104T113103_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_20200104T114934_20200104T120459_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_20200104T120532_20200104T120653_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_20200104T121135_20200104T121919_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_20200104T123433_20200104T123736_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_20200104T124003_20200104T125533_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_20200104T125747_20200104T131241_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_20200104T131929_20200104T132143_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_20200104T132225_20200104T132643_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_20200104T132847_20200104T134322_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_20200104T134501_20200104T140008_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_20200104T140130_20200104T140551_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_20200104T142253_20200104T143437_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_20200104T143929_20200104T145403_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_20200104T145720_20200104T150547_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_20200104T150821_20200104T153050_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_20200104T160639_20200104T163258_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_20200104T163910_20200104T164359_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_20200104T164733_20200104T164929_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_0FFL_SIR_IOPM_2_20200104T165034_20200104T171257_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_20200104T174533_20200104T181056_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_20200104T181829_20200104T182426_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_20200104T182651_20200104T185454_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_20200104T190219_20200104T190424_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_20200104T191712_20200104T195039_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_20200104T195737_20200104T200257_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_20200104T200704_20200104T200825_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_20200104T204041_20200104T204312_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_20200104T204347_20200104T204433_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_20200104T205642_20200104T210537_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_20200104T210823_20200104T213013_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_20200104T213627_20200104T213739_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_20200104T213745_20200104T214152_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_20200104T214641_20200104T215658_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_20200104T215846_20200104T220450_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_20200104T220632_20200104T221119_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_20200104T223537_20200104T230857_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_20200104T231133_20200104T231637_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_20200104T232738_20200104T235836_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T022958_20200104T023310_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPN_2_20200104T042749_20200104T042920_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T050501_20200104T050506_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T082428_20200104T082739_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_IOPN_2_20200104T121919_20200104T121943_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_20200104T095343_20200104T095716_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_20200104T125534_20200104T125747_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_20200104T140953_20200104T141232_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_20200104T205454_20200104T205508_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_20200104T215658_20200104T215845_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.

1

## 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.

1

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20200104T004936_20200104T005336_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_20200104T010822_20200104T011136_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_20200104T014813_20200104T015052_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_20200104T015113_20200104T015428_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_20200104T020604_20200104T021222_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_20200104T022519_20200104T022641_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_20200104T022958_20200104T023310_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_20200104T023310_20200104T023416_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_20200104T025224_20200104T025348_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_20200104T032728_20200104T033051_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_20200104T041753_20200104T041822_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_20200104T042401_20200104T042416_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_20200104T042956_20200104T043200_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_20200104T045828_20200104T050050_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_20200104T072529_20200104T072614_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.

Discription Control         Decode Backarder Galaty         more excess.           Cig. PTF_URB_ONU_20000101110601_0001         COOL Backarder Galaty         R.         The COOL Backarder Calaty PLass.           Cig. PTF_URB_ONU_20000101110601_0001         Cool Backarder Galaty         R.         The COOL Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_20001011110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB_ONU_2000101110601_0001         Cool Backarder Calaty PLass.         The Cool Backarder Calaty PLass.           Cig. PTF_URB	CS_OFFL_SIR_IOPN_2_20200104T082428_20200104T082739_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
Control         Control <t< td=""><td>CS_OFFL_SIR_IOPN_2_20200104T093318_20200104T093633_C001</td><td></td><td>The OCOG Range and Backscatter Quality Flags have been set for one or more records.</td></t<>	CS_OFFL_SIR_IOPN_2_20200104T093318_20200104T093633_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
Circle Step Delty 2, 20200101110201, 0200101111020, 0001       Peter Step Delty 2, 2020101110120, 000101110202, 0001         Circle Step Delty 2, 2020101110202, 000101110120, 0001       Peter Step Delty 2, 000101110120, 000101110120, 0001         Circle Step Delty 2, 2020101110120, 000101110120, 0001       Peter Step Delty 2, 000101110120, 000101110120, 0001         Circle Step Delty 2, 2020101110120, 000101110120, 0001       Peter Step Delty 2, 000101110120, 000101110120, 0001         Circle Step Delty 2, 2020101110120, 000101110200, 0001       Peter Step Delty 2, 000101110200, 000101110200, 0001         Circle Step Delty 2, 2020101110200, 000101110200, 0001       Peter Step Delty 2, 000101110200, 000101110200, 000101110200, 0001         Circle Step Delty 2, 2020101110200, 000101110200, 000101110200, 0001       Peter Step Delty 2, 000101110200,	CS_OFFL_SIR_IOPN_2_20200104T105851_20200104T105936_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
GBDEPL_SBM_OPPL_2_R000164T131207_0000164T120007_0000164T20007_000000000000000000000000000000000	CS_OFFL_SIR_IOPN_2_20200104T114231_20200104T114858_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CPUT_SIT_SIT_CONC_CONDITIESTICS_CON	CS_OFFL_SIR_IOPN_2_20200104T131321_20200104T131929_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB, CPFL_SRL_CPFL_2.0000141141448/_C000141141484/_C0001         met Between the Construction of the State of the construction of the constructio	CS_OFFL_SIR_IOPN_2_20200104T132143_20200104T132224_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCCO Bedevater Quality Files Incere reads  OCCO Allineder Range Quality FLRM The COCO Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Quality Flags have been set for one of the coco Range and Buckstater Qualit	CS_OFFL_SIR_IOPN_2_20200104T141640_20200104T141849_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Concern Annote France Charley France Charley France Charley France State Charley France State Charley France Charley Fran	CS_OFFL_SIR_IOPN_2_20200104T143453_20200104T143929_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OG_PPT_SH_UPT_2_6200104116359_20200104116359_2020104120259_202010412059_202010412159_2020010412159_2020010412159_202010412159_202010412159_202010412159_	CS_OFFL_SIR_IOPN_2_20200104T153224_20200104T153606_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
Corpert_Sin_JOPPU2_20200104110531F_20200104118510_C001         OCOG Backscatter Quality FLRM.         Incore records.           OS_OFFL_SIR_JOPPU2_20200104120028_202001041200417_0001         OCOG Backscatter Quality FLRM.         The OCOG Range and Backscatter Quality Flags have been set for one or records.           OS_OFFL_SIR_JOPPU2_20200104120028_202001041200210_C001         OCOG Backscatter Quality FLRM.         The OCOG Range and Backscatter Quality Flags have been set for one or records.           OS_OFFL_SIR_JOPPU2_202001041202212_202001041202319_C001         OCOG Backscatter Quality FLRM.         The OCOG Range and Backscatter Quality Flags have been set for one or records.           OS_OFFL_SIR_JOPPU2_202001041202319_C0001         OCOG Altrender Range Quality FLRM.         The OCOG Range and Backscatter Quality Flags have been set for one or records.           OS_OFFL_SIR_JOPPU2_202001041202707_02001041202737_C001         OCOG Altrender Range Quality FLRM.         The OCOG Range and Backscatter Quality Flags have been set for one or roore records.           OS_OFFL_SIR_JOPPU2_202001041205319_20200104120544_C001         Ocean Altrender Range Guality FLRM. OCOG Range and Backscatter Quality Flags have been set for one or roore records.         The OCOG Range and Backscatter Quality Flags have been set for one or roore records.           OS_OFFL_SIR_JOPPU2_202001041205506_202001041205607_C001         Altrender Range and Backscatter Quality Flags have been set for one or roore records.           OS_OFFL_SIR_JOPNU2_20200104121520507_C001         OCOG Altrender Range Guality FLRM. OCOG Range and Backscatter Quality Flags have been set for	CS_OFFL_SIR_IOPN_2_20200104T163503_20200104T163623_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
Open_Dell_OPIN_2_202001041181430_202001         OCCGG Backscatter Quality         more records.           CS_OFFL_SIR_IOPN_2_20200104T20258_20200104T200417_C001         OCCGG Backscatter Quality         The OCCGG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T202514_202212_20200104T202516_20200104T202535_20200104T202535         OCCGG Allmeter Range Quality PLRM, OCCGG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T202514_20220104T202537_C001         OCCGG Allmeter Range Quality PLRM, OCCGG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T202515_20200104T202577_C001         OCCGG Allmeter Range Quality PLRM, OCCGG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T205315_20200104T205454_C001         OCCGG Allmeter Range Quality PLRM, OCCGG Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T205061_C001         OCCGG Allmeter Range Quality PLRM, OCCG Allmeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T21308_20200104T21327_C001         OCCGG Allmeter Range Quality PLRM, OCCG Allmeter Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T21308_20200104T21327_C001         OCCGG Allmeter Range Quality PLRM, OCCG Allmeter Range and Backscatter Quality Flags have been set for one of more records.	CS_OFFL_SIR_IOPN_2_20200104T163819_20200104T163910_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CB_OFF_SIR_IOPR_2_20200104T202212_20200104T202219_C001       OCCG Backscatter Quality FLRM       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPR_2_20200104T202212_20200104T202319_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPR_2_20200104T202515_20200104T202656_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPR_2_20200104T205315_20200104T205645_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T205315_20200104T205647_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T205668_20200104T205617_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T215807_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T214512_20200104T214517_C001       OCCG Altimeter Range Quality PLRM       The OCOG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T214512_20200104T221451_C001       OCCG Altimeter Range Quality PLRM       The OCOG Ran	CS_OFFL_SIR_IOPN_2_20200104T181430_20200104T181550_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T202514_20200104T202585_C001         OCOG Backscatter Quality         The OCOG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T202514_20200104T202537_C001         OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SVH and Backscatter Quality Flags have been set for one of more records.         The OCOG Range and Backscatter Quality Flags have been set for one of more records.           CS_OFFL_SIR_IOPN_2_20200104T203505_20200104T205377_C001         Ocean Altimeter Range, SSHA, SVH and Backscatter Quality Flags have been set for one of the OCOG Altimeter Range SSHA, SVH and Backscatter Quality Flags have been set for one of the OCOG Altimeter Range and Backscatter Quality Flags have been set for one of the OCOG Range and Backscatter Quality Flags have been set for one of one records.           CS_OFFL_SIR_IOPN_2_20200104T203508_20200104T205617_C001         Mineter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or nore records.           CS_OFFL_SIR_IOPN_2_20200104T21308_20200104T216827_C001         OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or nore records.           CS_OFFL_SIR_IOPN_2_20200104T214152_2020104T214317_C001         OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or nore records.           CS_OFFL_SIR_IOPN_2_20200104T22050_2020104T220531_C001         CCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or nore records.           CS_OFFL_SIR_IOPN_2_20200104T220502_0200104T2220520_C001         CCOG Altimeter Range Qua	CS_OFFL_SIR_IOPN_2_20200104T200258_20200104T200417_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T203707_20200104T203737_C001       OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T205315_20200104T205454_C001       Ocean Altimeter Range AND Backscatter Quality FLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T205508_20200104T205617_C001       Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T205508_20200104T205617_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T213308_20200104T213827_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T214302_0200104T214317_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T222269_0200104T222629_0001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T222269_0200104T222529_0001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one c more records.         CS_OFFL_SIR_IOPN_2_20200104T222269_0200104T222529_0001       OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one c more re	CS_OFFL_SIR_IOPN_2_20200104T202212_20200104T202319_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_202001041203/0F_202001041203/0F_202001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_202001047205315_20200104720545_C001       and Backscatter Quality PLRN, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_202001047205508_202001047205617_C001       and Backscatter Quality PLRN, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104721308_202001047213627_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, 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_202001047220450_2	CS_OFFL_SIR_IOPN_2_20200104T202514_20200104T202658_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_2020104T205315_20200104T205454_C001       and Backscatter Quality Flags and backscatter Quality F	CS_OFFL_SIR_IOPN_2_20200104T203707_20200104T203737_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104T205508_20200104T205617_C001       and Backscatter Quality PLRM, OCCG       The Ocean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_IOPN_2_20200104T213308_20200104T213627_C001       OCCG Altimeter Range and Backscatter Quality       The OCCG Range and Backscatter Quality         CS_OFFL_SIR_IOPN_2_20200104T213308_20200104T213627_C001       OCCG Altimeter Range Quality PLRM, OCCG       The OCCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T214152_20200104T214317_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality       The OCCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T220450_20200104T220631_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality Flags have been set for one or more records.       The OCCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T222226_20200104T222529_C001       OCCG Altimeter Range Quality PLRM, OCCG Backscatter Quality Flags have been set for one or more records.       The OCCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T2230941_20200104T2231044_C001       OCCG Altimeter Range Quality PLRM, OCCG Range and Backscatter Quality Flags have been set for one or more records.       The OCCG Range and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPN_2_20200104T223005_20200104T232142_C001       OCCG Altimeter Range Quality PLRM, OCCG Range and Backscatter Quality Flags have been se	CS_OFFL_SIR_IOPN_2_20200104T205315_20200104T205454_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20200104T213306_20200104T213317_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_20200104T214152_20200104T214317_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_20200104T220450_20200104T220631_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_20200104T22226_20200104T222529_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_20200104T22226_20200104T222529_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_20200104T230941_20200104T231044_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_20200104T232005_20200104T232142_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20200104T005525_20200104T010045_C001       Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20200104T0101013_20200104T010231_C001       Ocean Altimeter Range, S	CS_OFFL_SIR_IOPN_2_20200104T205508_20200104T205617_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_202001041214132_202001041214317_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_202001041220450_20200104T220631_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T22226_20200104T222529_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T2200104T222529_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T230941_20200104T231044_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T232005_20200104T232142_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPR_2_20200104T005525_20200104T010045_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been and Backscatter Quality       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags<	CS_OFFL_SIR_IOPN_2_20200104T213308_20200104T213627_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_202001041220430_202001041220631_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_20200104T222226_20200104T2222529_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_20200104T230941_20200104T231044_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_20200104T232005_20200104T232142_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_20200104T232005_20200104T232142_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_20200104T005525_20200104T010045_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags	CS_OFFL_SIR_IOPN_2_20200104T214152_20200104T214317_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20200104122226_20200104122235_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_20200104T230941_20200104T231044_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T232005_20200104T232142_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for one of more records.         CS_OFFL_SIR_IOPN_2_20200104T005525_20200104T010045_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.       The OCean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have beer set for one or more records.	CS_OFFL_SIR_IOPN_2_20200104T220450_20200104T220631_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_202001041230941_202001041231044_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPN_2_20200104T232005_20200104T232142_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_20200104T005525_20200104T010045_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.         CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPN_2_20200104T222226_20200104T222529_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_202001041232005_202001041232142_C001       OCOG Backscatter Quality       more records.         CS_OFFL_SIR_IOPR_2_20200104T005525_20200104T010045_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range and Backscatter Quality PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM         CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have beer and Backscatter Quality PLRM.	CS_OFFL_SIR_IOPN_2_20200104T230941_20200104T231044_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20200104T01013_20200104T010231_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have beer set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality PLRM, OCOG	CS_OFFL_SIR_IOPN_2_20200104T232005_20200104T232142_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags have beer and the OCOG Altimeter Range and Backscatter Quality Flags	CS_OFFL_SIR_IOPR_2_20200104T005525_20200104T010045_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
PLRM set for one or more records.	CS_OFFL_SIR_IOPR_2_20200104T010113_20200104T010231_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
	CS_OFFL_SIR_IOPR_2_20200104T010637_20200104T010658_C001	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPR_2_20200104T013854_20200104T013939_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_20200104T015835_20200104T020037_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_20200104T022642_20200104T022901_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_20200104T023416_20200104T024115_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_20200104T024636_20200104T024658_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_20200104T025457_20200104T025620_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_20200104T025622_20200104T030242_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_20200104T035857_20200104T040042_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_20200104T041238_20200104T041753_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_20200104T041822_20200104T042052_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_20200104T063616_20200104T063750_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_20200104T064856_20200104T065229_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_20200104T072857_20200104T073803_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_20200104T074010_20200104T074218_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_20200104T082739_20200104T083103_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_20200104T090452_20200104T091418_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_20200104T092203_20200104T092333_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_20200104T095343_20200104T095716_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_20200104T104637_20200104T105317_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_20200104T105318_20200104T105851_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_20200104T122052_20200104T122143_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_20200104T122604_20200104T123139_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_20200104T123956_20200104T124002_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_20200104T125534_20200104T125747_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_20200104T140551_20200104T140735_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_20200104T141449_20200104T141639_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_20200104T142104_20200104T142252_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_20200104T145404_20200104T145529_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_20200104T160422_20200104T160639_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_20200104T163258_20200104T163502_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_20200104T172250_20200104T172354_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_20200104T172411_20200104T172433_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_20200104T172658_20200104T173207_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_20200104T181056_20200104T181430_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_20200104T190028_20200104T190219_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_20200104T190558_20200104T191401_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_20200104T195039_20200104T195420_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_20200104T204313_20200104T204347_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_20200104T204433_20200104T205315_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_20200104T214317_20200104T214641_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_20200104T222529_20200104T223317_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_20200104T232142_20200104T232737_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

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

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

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

Number of products with errors:

## 5.8 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20Hz)

Number of products with errors:	51					
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:	156					
6. IOP L2 Pole-to-Pole Data Quality Check						
6.1 P2P Product Format Check						
0.1 F2F Floudet Format Greek						

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: 0

#### 6.2 P2P Product Header Analysis

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

# 6.3 P2P Auxiliary Data File Usage Check

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

### 6.4 P2P Auxiliary Correction Error Check

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

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

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

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

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

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

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

	est Failed	Description
CS_OFFL_SIR_IOP_220200104T000726_20200104T005702_C001 Top	ean Sea Surface (1), Mean Dynamic opography (1), Total Geocentric Ocean	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
	ean Sea Surface (1), Mean Dynamic opography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
	ean Sea Surface (1), Mean Dynamic opography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20200104T064421_20200104T073356_C001 Top	ppography (1), Total Geocentric Ocean	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
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS OFFE SIR TOP 2 202001041082334 202001041091309 C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
	ean Sea Surface (1), Mean Dynamic opography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220200104T123137_20200104T132115_C001 Top Tid	ppography (1), Total Geocentric Ocean de (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_2_20200104T132115_20200104T141050_C001 Top	ppography (1), Total Geocentric Ocean	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
	ean Sea Surface (1), Mean Dynamic opography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
C3_0FFL_SIK_IOF_2_202001041103842_2020010411172917_C001	ppography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220200104T172917_20200104T181856_C001 Tid Tid	ean Sea Surface (1), Mean Dynamic opography (1), Total Geocentric Ocean de (GOT), Total Geocentric Ocean de (FES), Non-Equilibrium Long Period cean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
	ean Sea Surface (1), Mean Dynamic opography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20200104T213723_20200104T222658_C001 Top	pography (1), Total Geocentric Ocean	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_220200104T222658_20200104	T231636_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_220200104T231636_20200105	T000612_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 measur	ement record. The bit value of this flag inc	dicates any problems when set.				
Number of products with errors: 0							
6.6 P2P Measurement Quality Flag Check							
P2P Quality Flags (20Hz)							
CryoSat P2P data includes Quality Flags for each 20 Hz	, 20 Hz PLRM and 1 Hz m	easurement record, copied from the corre-	sponding 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:	30						
P2P Quality Flags (20Hz PLRM)							
Since the P2P Quality Flags are copied directly from	the L2 Quality Flags, ple	ase see Section 5.6 for the full list of p	roducts affected.				
Number of products with errors:	ducts with errors: 29						
P2P Quality Flags (1 Hz & 1Hz PLRM)							
Since the P2P Quality Flags are copied directly from	the L2 Quality Flags, ple	ase see Section 5.6 for the full list of p	roducts affected.				
Number of products with errors:	r of products with errors: 30						
6.8 P2P Ocean Retracking Quality Check							
<b>P2P Retracking Flags (20Hz)</b>	an (field 19) for each 20-H-	z measurement record. The hit value of th	is flan indicates any problems when set				
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.							
	24	it and ter reproduce over out los, but it					
P2P Retracking Flags PLRM							
rzr Retracking rrags rzkwi 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.							
umber of products with errors: 30							