



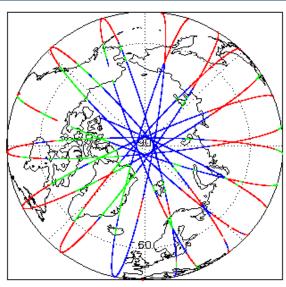
1. Overview

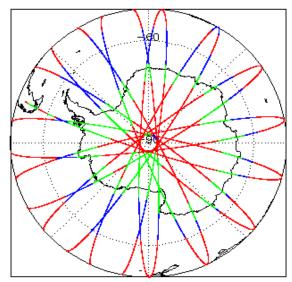
Report Production:	19-Nov-2019	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

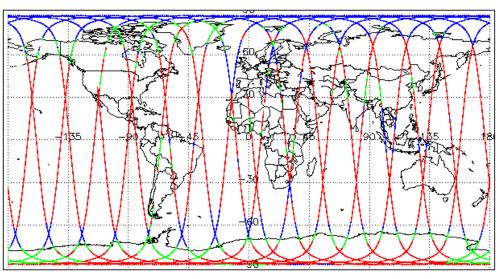
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7

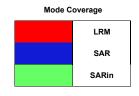
Mission / Instrument News		
15-Nov-2019	None	
16-Nov-2019	None	
17-Nov-2019	SIRAL unavailability on 17-Nov-2019 from 09:30:20 to 13:37:25 (All modes) and 13:44:25 to 15:33:16 (SAR & SARIN) due to an unplanned platform anomaly.	

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B IOPR and IOPN products because the I1b_processing_quality_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release

Number of products with errors:

4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

4.4 L1B Auxiliary Correction Error Check

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

0

4.5 L1B Measurement Confidence Data Check

CS_OFFL_SIR_IOPM1B_20191116T004641_20191116T005124_C001

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

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

Test Failed Description There is an error in the scaling of the L1B waveform for one or more Power scaling error

records

4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20191116T040136_20191116T041737_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20191116T193556_20191116T200031_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T001214_20191116T001624_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T010135_20191116T010535_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T024336_20191116T024431_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T041737_20191116T042036_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T042132_20191116T042346_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T142243_20191116T142710_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T163802_20191116T164001_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T174102_20191116T174553_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T182346_20191116T182535_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T210306_20191116T210742_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T222135_20191116T222332_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20191116T223032_20191116T223129_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191116T064525_20191116T064801_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191116T105551_20191116T110340_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191116T132015_20191116T132658_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191116T223417_20191116T224205_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20191116T233235_20191116T233643_C001	Loss of Echo	The tracking echo is missing for one or more records

5. IOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

0

5.2 L2 Product Header Analysis

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

Number of products with errors:

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.

5.4 L2 Auxiliary Correction Error Check

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20191116T160611_20191116T162406_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error wirh the MSS height (solution 1) and tidal corrections for one or more records.
CS_OFFL_SIR_IOPN_2_20191116T001214_20191116T001624_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_20191116T002156_20191116T002321_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_20191116T010135_20191116T010535_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_20191116T014948_20191116T015126_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_20191116T015949_20191116T020132_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_20191116T024336_20191116T024431_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_20191116T033741_20191116T033957_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_20191116T042132_20191116T042346_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_20191116T050757_20191116T050949_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_20191116T051635_20191116T052118_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_20191116T055814_20191116T060209_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_20191116T064801_20191116T065033_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_20191116T065751_201911116T065940_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_20191116T082644_20191116T082815_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_20191116T100701_20191116T100814_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_20191116T101553_20191116T101708_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_20191116T114613_20191116T114737_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_20191116T115246_20191116T115554_C001	mean sea surrace (1), mean uynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20191116T132658_20191116T132944_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_20191116T142243_20191116T142710_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_20191116T150623_20191116T150858_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_20191116T163802_20191116T164001_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20191116T164341_201911116T164709_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_20191116T174102_20191116T174553_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_20191116T182346_20191116T182535_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_20191116T183351_20191116T183612_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_20191116T192102_20191116T192403_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_20191116T214319_201911116T214655_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_20191116T215231_20191116T215346_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_20191116T222135_20191116T222332_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_20191116T232239_20191116T232558_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_20191116T010535_20191116T010843_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_20191116T010843_20191116T011308_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_20191116T024432_20191116T025013_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_20191116T025027_20191116T025143_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_20191116T042346_20191116T042632_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_20191116T042632_20191116T043036_C001	Mean Sea Surface (1), Mean Dynamic Topography (1) mean Sea Surrace (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20191116T055557_20191116T055733_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FFS), Non-Fauilibrium Long Perioc	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPR_2_20191116T060209_20191116T060729_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_20191116T074025_20191116T075022_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_20191116T091759_20191116T092537_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)
		There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_IOPR_2_20191116T093457_20191116T093535_C001	Mean Dynamic Topography (1)	more records
CS_OFFL_SIR_IOPR_2_20191116T093457_20191116T093535_C001 CS_OFFL_SIR_IOPR_2_20191116T093542_20191116T093654_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1)	
		more records There is an error with the Mean Dynamic Topography height for one or
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CS_OFFL_SIR_IOPR_2_20191116T093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the Mean Dynamic Topography height 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
CS_OFFL_SIR_IOPR_2_20191116T093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the Mean Dynamic Topography height 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
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CS_OFFL_SIR_IOPR_2_20191116T093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001 CS_OFFL_SIR_IOPR_2_20191116T123534_20191116T124239_C001 CS_OFFL_SIR_IOPR_2_20191116T124239_20191116T124522_C001 CS_OFFL_SIR_IOPR_2_20191116T141531_20191116T141619_C001 CS_OFFL_SIR_IOPR_2_20191116T141713_20191116T142131_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	more records There is an error with the Mean Dynamic Topography height 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) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) There is an error with the Mean Dynamic Topography height for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
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CS_OFFL_SIR_IOPR_2_20191116T1093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001 CS_OFFL_SIR_IOPR_2_20191116T123534_20191116T124239_C001 CS_OFFL_SIR_IOPR_2_20191116T124239_20191116T124522_C001 CS_OFFL_SIR_IOPR_2_20191116T141531_20191116T141619_C001 CS_OFFL_SIR_IOPR_2_20191116T141713_20191116T142131_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography height 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) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) There is an error with the Mean Dynamic Topography height 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) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20191116T093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001 CS_OFFL_SIR_IOPR_2_20191116T123534_20191116T124239_C001 CS_OFFL_SIR_IOPR_2_20191116T124239_20191116T124522_C001 CS_OFFL_SIR_IOPR_2_20191116T141531_20191116T141619_C001 CS_OFFL_SIR_IOPR_2_20191116T141713_20191116T142131_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001 CS_OFFL_SIR_IOPR_2_20191116T155508_20191116T155949_C001 CS_OFFL_SIR_IOPR_2_20191116T1555949_20191116T160143_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography height 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) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) There is an error with the Mean Dynamic Topography height 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) 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_IOPR_2_20191116T093542_20191116T093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001 CS_OFFL_SIR_IOPR_2_20191116T123534_20191116T124239_C001 CS_OFFL_SIR_IOPR_2_20191116T124239_20191116T124522_C001 CS_OFFL_SIR_IOPR_2_20191116T141531_20191116T141619_C001 CS_OFFL_SIR_IOPR_2_20191116T141713_20191116T142131_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001 CS_OFFL_SIR_IOPR_2_20191116T155508_20191116T155949_C001 CS_OFFL_SIR_IOPR_2_20191116T155949_20191116T160143_C001 CS_OFFL_SIR_IOPR_2_20191116T155949_20191116T160143_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1)	more records There is an error with the Mean Dynamic Topography height 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) There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) There is an error with the Mean Dynamic Topography height 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) 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_IOPR_2_20191116T1093542_20191116T1093654_C001 CS_OFFL_SIR_IOPR_2_20191116T105551_20191116T110340_C001 CS_OFFL_SIR_IOPR_2_20191116T110340_20191116T110505_C001 CS_OFFL_SIR_IOPR_2_20191116T123534_20191116T124239_C001 CS_OFFL_SIR_IOPR_2_20191116T124239_20191116T124522_C001 CS_OFFL_SIR_IOPR_2_20191116T141531_20191116T142131_C001 CS_OFFL_SIR_IOPR_2_20191116T141713_20191116T142131_C001 CS_OFFL_SIR_IOPR_2_20191116T142131_20191116T142243_C001 CS_OFFL_SIR_IOPR_2_20191116T155508_20191116T155949_C001 CS_OFFL_SIR_IOPR_2_20191116T155949_20191116T160143_C001 CS_OFFL_SIR_IOPR_2_20191116T171223_20191116T171634_C001 CS_OFFL_SIR_IOPR_2_20191116T171223_20191116T171634_C001	Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records There is an error with the 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 Mean Dynamic Topography height 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) 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)

5.5 L2 Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20191116T004641_20191116T005124_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20Hz)

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20191115T234831_20191116T000949_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_20191116T002722_20191116T003701_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_20191116T003849_20191116T004506_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_20191116T004641_20191116T005124_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_20191116T011326_20191116T011406_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_20191116T011413_20191116T014836_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_20191116T020740_20191116T023805_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_20191116T025505_20191116T025704_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_20191116T025754_20191116T031101_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_20191116T031306_20191116T032819_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_20191116T033035_20191116T033538_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_20191116T034502_20191116T035516_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_20191116T040136_20191116T041737_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_20191116T044844_20191116T045126_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_20191116T045305_20191116T050645_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_20191116T050949_20191116T051448_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_20191116T052233_20191116T055557_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_20191116T062435_20191116T064525_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_20191116T065427_20191116T065750_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_20191116T070121_20191116T072848_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_20191116T1082815_20191116T1083319_C001 CS_OFFL_SIR_IOPM_2_20191116T084135_20191116T091428_C001 CS_OFFL_SIR_IOPM_2_20191116T092731_20191116T099221_C001 CS_OFFL_SIR_IOPM_2_20191116T00004_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100304_C001 CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100304_C001 CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100304_C001 CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100004_C00191116T100004
and Backscatter Quality CS_OFFL_SIR_IOPM_2_20191116T092731_20191116T092921_C001 CS_OFFL_SIR_IOPM_2_20191116T092731_20191116T092921_C001 CS_OFFL_SIR_IOPM_2_20191116T10004_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T10004_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T100342_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T105342_C001 CS_OFFL_SIR_IOPM_2_20191116T10642_20191116T10752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T10752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1106
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Set for one or more records. CS_OFFL_SIR_IOPM_2_20191116T100004_20191116T100331_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T101351_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T101351_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T101351_C001 CS_OFFL_SIR_IOPM_2_20191116T102121_20191116T105342_C001 CS_OFFL_SIR_IOPM_2_20191116T102121_20191116T105342_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1110642_20191116T1110642_20191116T1110642_20191116T1110642_20191116T1110642_20191116T1110642_20191116T1110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T1110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T111110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T11110642_20191116T1111
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records. CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T101351_C001 CS_OFFL_SIR_IOPM_2_20191116T100814_20191116T101351_C001 CS_OFFL_SIR_IOPM_2_20191116T102121_20191116T105342_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1105342_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T1105342_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T11052_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T11052_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T1114159_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T111594_C001 CS_OFFL_SIR_IOPM_2_20191116T1114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T1123524_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_20191116T116T115941_20191116T112354_C001 CS_OFFL_SIR_IOPM_2_
Backscatter Quality CS_OFFL_SIR_IOPM_2_20191116T102121_20191116T105342_C001 CS_OFFL_SIR_IOPM_2_20191116T102121_20191116T1105342_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T114159_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T114159_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T114159_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T115246_C001 CC_OCA Altimeter Range Quality, OCOG Backscatter Quality In COCA Altimeter Range and Backscatter Quality In COCA Altimeter
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records. CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T110642_20191116T110752_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T1114159_C001 CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T1115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T123524_C001
and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have Set for one or more records. CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T114159_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T114737_20191116T115246_C001 CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T123524_C001
CS_OFFL_SIR_IOPM_2_20191116T112623_20191116T114159_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, OCOG Backscatter Quality OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records. The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records. OCOG Altimeter Range, SSHA, SWH Backscatter Quality OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records. OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have be for one or more records.
Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have
CS_OFFL_SIR_IOPM_2_20191116T115941_20191116T123524_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have
CS_OFFL_SIR_IOPM_2_20191116T124522_20191116T124709_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and Backscatter Quality Flags have a set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T125724_20191116T130145_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality Flags have a little to the composition of the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a little to the OCOG Altimeter Range and Backscatter Quality Flags have a litt
CS_OFFL_SIR_IOPM_2_20191116T130240_20191116T132015_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality COG Altimeter Range and Backscatter Quality Set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T133922_20191116T135554_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and Backscatter Quality COG Altimeter Range and Backscatter Quality Set for one or more records.
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Altimeter Range and Backscatter Quality Flags have a compared to the Ocean Alti
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have a set for one or more records. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have a set for one or more records.
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have a set for one or more records. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have a set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T144706_20191116T150046_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T150858_20191116T151057_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T151212_20191116T151559_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T151808_20191116T153318_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T153519_20191116T154443_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and Backscatter Quality Flags have and Backscatter Quality Flags have set for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T154934_20191116T154956_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T160254_20191116T160413_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have be for one or more records.
CS_OFFL_SIR_IOPM_2_20191116T160611_20191116T162406_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have a large and B

CS_OFFL_SIR_IOPM_2_20191116T164709_20191116T165501_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_20191116T165800_20191116T171223_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
CS_OFFL_SIR_IOPM_2_20191116T174713_20191116T174901_C001	Altimeter Range and Backscatter Quality 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
CS_OFFL_SIR_IOPM_2_20191116T175025_20191116T182200_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
CS_OFFL_SIR_IOPM_2_20191116T182535_20191116T182747_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_20191116T182806_20191116T183351_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_20191116T183741_20191116T190156_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_20191116T193341_20191116T193553_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_20191116T193556_20191116T200031_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_20191116T200745_20191116T201211_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_20191116T201659_20191116T204219_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_20191116T204757_20191116T205034_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_20191116T205140_20191116T205354_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_20191116T210742_20191116T213841_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_20191116T214655_20191116T215231_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_20191116T215614_20191116T220015_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_20191116T223129_20191116T223319_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_20191116T224619_20191116T231905_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_20191116T232558_20191116T233110_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_20191116T233643_20191116T235255_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_20191116T075906_20191116T075931_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_20191116T100701_20191116T100814_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_20191116T172146_20191116T172544_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_20191116T190156_20191116T190541_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_20191116T191551_20191116T191625_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_20191116T224436_20191116T224619_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_20191116T010843_20191116T011308_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_20191116T031101_20191116T031306_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20191116T092602_20191116T092731_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_20191116T124239_20191116T124522_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_20191116T200031_20191116T200318_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (20Hz PLRM)

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20191116T002156_20191116T002321_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_20191116T004556_20191116T004641_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T005948_20191116T010034_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T010135_20191116T010535_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_20191116T014948_20191116T015126_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T023805_20191116T023944_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_20191116T033741_20191116T033957_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T035853_20191116T035923_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T041737_20191116T042036_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_20191116T042132_20191116T042346_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_20191116T050757_20191116T050949_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_20191116T051635_20191116T052118_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_20191116T055814_20191116T060209_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_20191116T060729_20191116T060803_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_20191116T061705_20191116T061810_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T064801_20191116T065033_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_20191116T075132_20191116T075151_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one o more records.
CS_OFFL_SIR_IOPN_2_20191116T082644_20191116T082815_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_20191116T083653_20191116T083827_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_20191116T094712_20191116T094907_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_20191116T100701_20191116T100814_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_20191116T101553_20191116T101708_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_20191116T105353_20191116T105441_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_20191116T110505_20191116T110528_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_20191116T110752_20191116T110859_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_20191116T111324_20191116T111347_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_20191116T111351_20191116T1111433_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_20191116T142243_20191116T142710_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_20191116T154443_20191116T154745_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_20191116T160143_20191116T160254_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_20191116T162406_20191116T163008_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_20191116T163802_20191116T164001_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_20191116T165501_20191116T165648_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_20191116T172146_20191116T172544_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_20191116T174102_20191116T174553_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_20191116T174901_20191116T175025_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_20191116T183351_20191116T183612_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_20191116T190156_20191116T190541_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_20191116T192102_20191116T192403_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_20191116T192606_20191116T192729_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_20191116T193037_20191116T193322_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_20191116T200318_20191116T200458_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_20191116T201211_20191116T201458_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_20191116T210306_20191116T210742_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_20191116T214319_20191116T214655_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_20191116T215231_20191116T215346_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_20191116T222135_20191116T222332_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_20191116T224205_20191116T224225_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_20191116T224436_20191116T224619_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_20191116T232239_20191116T232558_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_20191116T235255_20191116T235610_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_20191116T000949_20191116T001214_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_20191116T010535_20191116T010843_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_20191116T010843_20191116T011308_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_20191116T011311_20191116T011325_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_20191116T014836_20191116T014948_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_20191116T015653_20191116T015700_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_20191116T020132_20191116T020740_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_20191116T024432_20191116T025013_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_20191116T025027_20191116T025143_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_20191116T033958_20191116T034502_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_20191116T035923_20191116T040136_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_20191116T042036_20191116T042132_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_20191116T042632_20191116T043036_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_20191116T060209_20191116T060729_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_20191116T062353_20191116T062435_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_20191116T065940_20191116T070121_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_20191116T074025_20191116T075022_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_20191116T083827_20191116T084135_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_20191116T091759_20191116T092537_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_20191116T092921_20191116T093037_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_20191116T093457_20191116T093535_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_20191116T093542_20191116T093654_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_20191116T100331_20191116T100701_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_20191116T101708_20191116T102121_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_20191116T105551_20191116T110340_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_20191116T110903_20191116T111238_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_20191116T111441_20191116T111818_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_20191116T114159_20191116T114613_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

Number of products with errors: 1

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors:

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

6.1 P2P Product Format Check

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

Number of products with errors:

6.2 P2P Product Header Analysis

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

Number of products with errors:

6.3 P2P Auxiliary Data File Usage Check

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

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.

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220191115T232752_20191116T001727_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20191116T001727_20191116T010706_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_2_20191116T010706_20191116T015640_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20191116T015640_20191116T024619_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_220191116T024619_20191116T033554_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_220191116T033554_20191116T042533_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_2_20191116T042533_20191116T051507_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_220191116T051507_20191116T060446_C001	mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220191116T060446_20191116T065421_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_220191116T065421_20191116T074400_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_220191116T074400_20191116T083335_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_220191116T083335_20191116T092314_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_220191116T092314_20191116T101248_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_220191116T101248_20191116T110227_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_220191116T110227_20191116T115202_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20191116T115202_20191116T124141_C001	mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Fauilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20191116T124141_20191116T133115_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_220191116T133115_20191116T142054_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_220191116T142054_20191116T151029_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_220191116T151029_20191116T160008_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_220191116T160008_20191116T164942_C001	wean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Mon-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220191116T164942_20191116T173922_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_220191116T173922_20191116T182856_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_220191116T182856_20191116T191835_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_220191116T191835_20191116T200810_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20191116T200810_20191116T205749_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_220191116T205749_20191116T214723_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20191116T214723_20191116T223702_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_220191116T223702_20191116T232637_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)

6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_2_20191116T001727_20191116T010706_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

6.6 P2P Measurement Quality Flag Check

P2P Quality Flags (20Hz)

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

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

Number of products with errors:

P2P Quality Flags (20Hz PLRM)

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

Number of products with errors:

P2P Quality Flags (1 Hz & 1Hz PLRM)

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

Number of products with errors: 3

6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20Hz)

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

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

Number of products with errors: 2

P2P Retracking Flags PLRM

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

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