

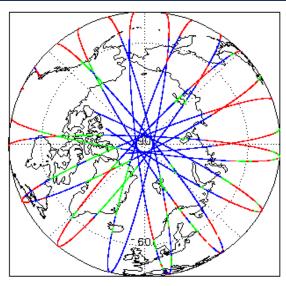
1. Overview

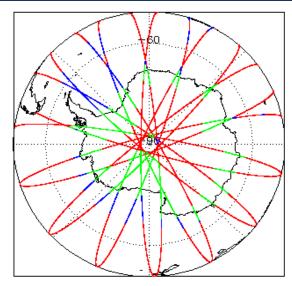
Report Production:	15-Mar-2022		
Processor Used:	CryoSat Ocean Processor		
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data		

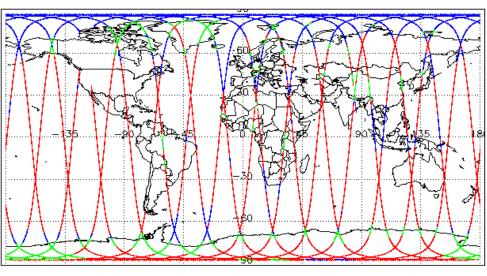
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	See Section 4.3 and 5.3	See Section 6.3
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

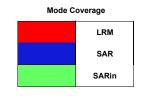
Mission / Instrument News	
11-Mar-2022	None
12-Mar-2022	None
13-Mar-2022	Nothing planned

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

Number of products with errors:

C

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: 21

Product	AUX File	Comment
All IOPM_1B products (58 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing
All IOPR_1B products (60 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing
All IOPN_1B products (96 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing

4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors: 214

Product	Test Failed	Description
All IOPM_1B products (58 products)		Due to missing MOG_2D Forecast Auxiliary Files, there is an error with the Dynamic Atmospheric correction.
All IOPR_1B products (60 products)	Dynamic Atmospheric Correction	Due to missing MOG_2D Forecast Auxiliary Files, there is an error with the Dynamic Atmospheric correction.
All IOPN_1B products (96 products)		Due to missing MOG_2D Forecast Auxiliary Files, there is an error with the Dynamic Atmospheric correction.

4.5 L1B Measurement Confidence Data Check

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

> Attitude Correction Missing: This flag is currently set in error for IOPR products due to a configuration issue. The attitude correction is actually not missing. This will be resolved in the next SW updates the configuration is actually not missing.

Number of products with errors:

4.6 L1B Waveform Group Data Check

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

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

Number of products with errors: 17

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20220312T034946_20220312T035039_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220312T070651_20220312T070700_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220312T224613_20220312T225021_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220312T003813_20220312T004259_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220312T052521_20220312T052634_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220312T070746_20220312T071152_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220312T220812_20220312T220921_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T035222_20220312T040013_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T053038_20220312T054323_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T071152_20220312T071925_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T085718_20220312T085812_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T090200_20220312T090258_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T091722_20220312T091926_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T094619_20220312T095109_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T102703_20220312T102751_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T153225_20220312T153726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220312T234100_20220312T234729_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 NetCDF product file (.nc).

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors:

5.3 L2 Auxiliary Data File Usage Check

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

Product	AUX File	Comment
All IOPM_2 products (58 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing
All IOPR_2 products (60 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing
All IOPN_2 products (96 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing

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.

Test Failed

- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors: 214

Product	Test Failed	Description
All IOPM_2 products (58 products)	Dynamic Atmospheric Correction	There is an error with the Dynamic Atmospheric Correction for one or more records
All IOPR_2 products (60 products)	Dynamic Atmospheric Correction	There is an error with the Dynamic Atmospheric Correction for one or more records
All IOPN_2 products (96 products)	Dynamic Atmospheric Correction	There is an error with the Dynamic Atmospheric Correction for one or more records
CS_OFFL_SIR_IOPM_2_20220312T022724_20220312T022956_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20220312T033337_20220312T033846_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_IOPM_2_20220312T091926_20220312T093514_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20220312T154313_20220312T154346_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20220312T154528_20220312T155335_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_20220312T003813_20220312T004259_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_20220312T030056_20220312T030448_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_20220312T035127_20220312T035222_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_20220312T044043_20220312T044356_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_20220312T052521_20220312T052634_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_20220312T061818_20220312T062235_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_20220312T062813_20220312T062936_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_20220312T070746_20220312T071152_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_20220312T080555_20220312T080741_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_20220312T084955_20220312T085048_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_20220312T094357_20220312T094618_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_20220312T102751_20220312T103003_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_20220312T112257_20220312T112729_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_20220312T120435_20220312T120827_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_20220312T125423_20220312T125656_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_20220312T130415_20220312T130558_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_20220312T144315_20220312T144451_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_20220312T161323_20220312T161439_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_20220312T162013_20220312T162331_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_20220312T175242_20220312T175401_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_20220312T175910_20220312T180221_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_20220312T193337_20220312T193615_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_20220312T193814_20220312T194346_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_20220312T202906_20220312T203354_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_20220312T211248_20220312T211523_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_20220312T220812_20220312T220921_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_20220312T003010_20220312T003101_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_20220312T003101_20220312T003813_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_20220312T021310_20220312T021843_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_20220312T034151_20220312T034309_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_20220312T035222_20220312T040013_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_20220312T052341_20220312T052521_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_20220312T053038_20220312T054323_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_20220312T071152_20220312T071925_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_20220312T085048_20220312T085629_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_20220312T103004_20220312T103655_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_20220312T120828_20220312T121343_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_20220312T134624_20220312T135652_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_20220312T152426_20220312T153200_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_20220312T154115_20220312T154312_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_20220312T165933_20220312T171003_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_20220312T171003_20220312T171127_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_20220312T184237_20220312T184903_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_20220312T184903_20220312T185330_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_20220312T202339_20220312T202755_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_20220312T202755_20220312T202906_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_20220312T220133_20220312T220415_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_20220312T220415_20220312T220812_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_20220312T234100_20220312T234729_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20 Hz)

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

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

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

Number of products with errors:

86

Number of products with errors: 86		
Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20220312T004300_20220312T004359_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_20220312T005618_20220312T012028_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_20220312T012245_20220312T012429_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_20220312T012532_20220312T013000_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_20220312T013258_20220312T015845_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_20220312T022724_20220312T022956_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_20220312T023122_20220312T025926_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_20220312T030449_20220312T031039_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_20220312T031205_20220312T032734_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_20220312T033337_20220312T033846_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_20220312T034501_20220312T034629_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_20220312T040312_20220312T043824_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_20220312T044356_20220312T044911_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_20220312T045046_20220312T045353_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_20220312T045553_20220312T045850_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_20220312T052635_20220312T052916_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_20220312T054323_20220312T055202_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_20220312T055448_20220312T061726_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_20220312T062405_20220312T062813_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_20220312T062947_20220312T064319_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_20220312T064507_20220312T065225_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_20220312T08531_20220312T08597_C001 CS_OFFL_SIR_IOPM_2_20220312T072335_20220312T080257_C001 CS_OFFL_SIR_IOPM_2_20220312T072335_20220312T080257_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T080257_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T080257_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T081052_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T081052_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T08108268_C001 CS_OFFL_SIR_IOPM_2_20220312T081082840_C001 CS_OFFL_SIR_IOPM_2_20220312T0842840_20220312T084406_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084985_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084985_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084985_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084985_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084985_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084592_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084596_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084596_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084596_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084596_20220312T084596_C001 CS_OFFL_SIR_IOPM_2_20220312T084596_20220312T094596_C001 CS_OFFL_SIR_IOPM_2_20220312T091926_20220312T094596_C001 CS_OFFL_SIR_IOPM_2_20220312T091926_20220312T094596_C001 CS_OFFL_SIR_IOPM_2_20220312T091926_20220312T094596_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094297_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T094297_C001 CS_OFFL_SIR_IOPM_2_20220312T094596_20220312T109466_C001 CS_OFF	e been set lity Flags have been lity Flags have been lity Flags have been e been set
and Backscatter Quality COGG Altimeter Range and Backscatter Quality CoGG Altimeter Range and Backscatter Quality Flags and the OCGG Altimeter Range and Backscatter Quality Flags and Cogno Altimeter Range and Backscatter Quality Flags have for one or more records CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T081052_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T081052_C001 CS_OFFL_SIR_IOPM_2_20220312T081010_20220312T082628_C001 CS_OFFL_SIR_IOPM_2_20220312T081358_20220312T082628_C001 CS_OFFL_SIR_IOPM_2_20220312T082640_20220312T082628_C001 CS_OFFL_SIR_IOPM_2_20220312T082640_20220312T08408_C001 CS_OFFL_SIR_IOPM_2_20220312T082640_20220312T08408_C001 CS_OFFL_SIR_IOPM_2_20220312T082640_20220312T084095_C001 CS_OFFL_SIR_IOPM_2_20220312T084559_20220312T084955_C001 CS_OFFL_SIR_IOPM_2_20220312T099529_20220312T094955_C001 CS_OFFL_SIR_IOPM_2_20220312T099529_20220312T094156_C001 CS_OFFL_SIR_IOPM_2_20220312T099566_20220312T094156_C001 CS_OFFL_SIR_IOPM_2_20220312T099566_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T099566_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094270_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094270_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094270_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T094270_C001 CS_OFFL_SIR_IOPM_2_20220312T09556_20220312T0956_2020312T0956_	e been set lity Flags have been lity Flags have been lity Flags have been e been set
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and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range Quality, OCOG Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records OCGA Altimet	e been set lity Flags have been
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CS_OFFL_SIR_IOPM_2_20220312T091926_20220312T093514_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags set for one or more records CS_OFFL_SIR_IOPM_2_20220312T093656_20220312T094156_C001 CS_OFFL_SIR_IOPM_2_20220312T094216_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094216_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T094216_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T095109_20220312T100136_C001 CS_OFFL_SIR_IOPM_2_20220312T095109_20220312T100136_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 And Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_2022031	lity Floor
CS_OFFL_SIR_IOPM_2_20220312T094216_20220312T094227_C001 Backscatter Quality CS_OFFL_SIR_IOPM_2_20220312T094216_20220312T094227_C001 CS_OFFL_SIR_IOPM_2_20220312T095109_20220312T100136_C001 CS_OFFL_SIR_IOPM_2_20220312T095109_20220312T100136_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T105925_20220312T111408_C001 Backscatter Quality CCGAltimeter Range Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records CCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records	
Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags The Ocean Altimeter Range and Backscatter Quality Flags The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range and Backscatter Quality Flags Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags The Ocean Altimeter Range and Backscatter Quality Flags Set for one or more records	e been set
CS_OFFL_SIR_IOPM_2_20220312T1095109_20220312T100136_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags Set for one or more records CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 CS_OFFL_SIR_IOPM_2_20220312T105925_20220312T111408_C001 And Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags set for one or more records Coean Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_IOPM_2_20220312T105925_20220312T111408_C001 And Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags Altimeter Range, SSHA, SWH and Backscatter Quality Flags SSHA, SWH and Backscatter Quality Flags	e been set
CS_OFFL_SIR_IOPM_2_20220312T100755_20220312T101907_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags	
CS_OFFL_SIR_IOPM_2_20220312T105925_20220312T111408_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags	
CS_OFFL_SIR_IOPM_2_20220312T111614_20220312T112108_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records	e been set
CS_OFFL_SIR_IOPM_2_20220312T112729_20220312T120133_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags set for one or more records	
Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags at for one or more records	
CS_OFFL_SIR_IOPM_2_20220312T125100_20220312T125347_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Pool F	
CS_OFFL_SIR_IOPM_2_20220312T130048_20220312T130415_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records	e been set
CS_OFFL_SIR_IOPM_2_20220312T130634_20220312T133551_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Quality Set for one or more records	
CS_OFFL_SIR_IOPM_2_20220312T140907_20220312T143310_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags and Bac	
CS_OFFL_SIR_IOPM_2_20220312T143440_20220312T143940_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records	e been set
CS_OFFL_SIR_IOPM_2_20220312T143947_20220312T144315_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records	e been set
CS_OFFL_SIR_IOPM_2_20220312T144604_20220312T152107_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Qual	
CS_OFFL_SIR_IOPM_2_20220312T154528_20220312T155335_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags set for one or more records	ility Flags
CS_OFFL_SIR_IOPM_2_20220312T160629_20220312T161300_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags set for one or more records	ality Flags have been ality Flags

CS_OFFL_SIR_IOPM_2_20220312T161440_20220312T162013_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_20220312T162524_20220312T165932_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_20220312T171321_20220312T171426_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_20220312T172017_20220312T172029_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_20220312T173245_20220312T175223_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_20220312T175401_20220312T175909_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_20220312T180430_20220312T183909_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_20220312T190349_20220312T190811_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_20220312T190906_20220312T192643_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_20220312T194502_20220312T200015_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_20220312T200135_20220312T200234_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_20220312T200715_20220312T201425_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_20220312T203427_20220312T205204_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_20220312T205332_20220312T210731_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_20220312T211523_20220312T211725_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_20220312T211830_20220312T212226_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_20220312T212405_20220312T213943_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_20220312T214145_20220312T215108_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_20220312T221902_20220312T223013_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_20220312T224613_20220312T225021_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_20220312T225329_20220312T230129_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_20220312T230318_20220312T231851_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_20220312T233533_20220312T233538_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_20220312T075609_20220312T075735_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_20220312T100136_20220312T100242_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_20220312T161323_20220312T161439_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_20220312T172007_20220312T172017_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_20220312T175242_20220312T175401_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_20220312T175910_20220312T180221_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_20220312T211725_20220312T211829_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_20220312T223013_20220312T223020_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_20220312T225021_20220312T225050_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_20220312T230130_20220312T230318_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_20220312T034151_20220312T034309_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_20220312T035039_20220312T035127_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_20220312T094619_20220312T095109_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_20220312T205205_20220312T205332_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_20220312T221154_20220312T221622_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_20220312T225050_20220312T225107_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 (20 Hz PLRM)

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20220312T003813_20220312T004259_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_20220312T012429_20220312T012532_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_20220312T020242_20220312T020302_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_20220312T031039_20220312T031205_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_20220312T034638_20220312T034802_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_20220312T040013_20220312T040111_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_20220312T050748_20220312T050811_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_20220312T052130_20220312T052222_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_20220312T061818_20220312T062235_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_20220312T062813_20220312T062936_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_20220312T070604_20220312T070651_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_20220312T070746_20220312T071152_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_20220312T084413_20220312T084529_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_20220312T093514_20220312T093656_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_20220312T094357_20220312T094618_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_20220312T100136_20220312T100242_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_20220312T100618_20220312T100755_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_20220312T102408_20220312T102703_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_20220312T102751_20220312T103003_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_20220312T120435_20220312T120827_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_20220312T121343_20220312T121416_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_20220312T130415_20220312T130558_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_20220312T144315_20220312T144451_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
	0000 4111 4 5 0 111 51 514	
CS_OFFL_SIR_IOPN_2_20220312T152321_20220312T152426_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_20220312T152321_20220312T152426_C001 CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	
	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM,	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001 CS_OFFL_SIR_IOPN_2_20220312T175910_20220312T180221_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001 CS_OFFL_SIR_IOPN_2_20220312T175910_20220312T180221_C001 CS_OFFL_SIR_IOPN_2_20220312T193814_20220312T194346_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001 CS_OFFL_SIR_IOPN_2_20220312T175910_20220312T180221_C001 CS_OFFL_SIR_IOPN_2_20220312T193814_20220312T194346_C001 CS_OFFL_SIR_IOPN_2_20220312T202906_20220312T203354_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001 CS_OFFL_SIR_IOPN_2_20220312T175910_20220312T180221_C001 CS_OFFL_SIR_IOPN_2_20220312T193814_20220312T194346_C001 CS_OFFL_SIR_IOPN_2_20220312T202906_20220312T203354_C001 CS_OFFL_SIR_IOPN_2_20220312T202906_20220312T211829_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220312T155335_20220312T155709_C001 CS_OFFL_SIR_IOPN_2_20220312T161323_20220312T161439_C001 CS_OFFL_SIR_IOPN_2_20220312T171127_20220312T171153_C001 CS_OFFL_SIR_IOPN_2_20220312T173104_20220312T173245_C001 CS_OFFL_SIR_IOPN_2_20220312T175910_20220312T180221_C001 CS_OFFL_SIR_IOPN_2_20220312T193814_20220312T194346_C001 CS_OFFL_SIR_IOPN_2_20220312T202906_20220312T203354_C001 CS_OFFL_SIR_IOPN_2_20220312T211725_20220312T211829_C001 CS_OFFL_SIR_IOPN_2_20220312T211725_20220312T211829_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPR_2_20220312T033846_20220312T034016_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_20220312T034802_20220312T034840_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_20220312T035222_20220312T040013_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_20220312T045850_20220312T050346_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_20220312T052341_20220312T052521_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_20220312T053038_20220312T054323_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_20220312T064320_20220312T064507_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_20220312T065742_20220312T070502_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_20220312T070502_20220312T070604_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_20220312T071152_20220312T071925_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_20220312T090058_20220312T090114_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_20220312T091723_20220312T091926_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_20220312T094619_20220312T095109_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_20220312T102245_20220312T102407_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_20220312T103004_20220312T103655_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_20220312T105038_20220312T105925_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_20220312T120133_20220312T120331_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_20220312T121417_20220312T121538_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_20220312T134624_20220312T135652_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_20220312T152426_20220312T153200_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_20220312T153225_20220312T153726_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_20220312T154115_20220312T154312_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_20220312T154416_20220312T154527_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_20220312T165933_20220312T171003_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_20220312T171554_20220312T171912_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_20220312T172110_20220312T172429_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_20220312T184237_20220312T184903_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_20220312T201629_20220312T201907_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_20220312T201909_20220312T201915_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_20220312T202339_20220312T202755_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_20220312T203355_20220312T203427_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_20220312T210731_20220312T211247_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_20220312T220133_20220312T220415_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_20220312T220415_20220312T220812_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_20220312T221154_20220312T221622_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_20220312T221716_20220312T221902_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_20220312T232132_20220312T232654_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_20220312T234100_20220312T234729_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 & 1 Hz PLRM)

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

> 1 Hz and 1 Hz 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 (20 Hz)

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 (20 Hz 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: 13

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

6.1 P2P Product Format Check

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

Number of products with errors:

6.2 P2P Product Header Analysis

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

Number of products with errors:

6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors: 29

Product	AUX File	Comment
All IOP_2 products (29 products)	CS_OPER_AUXIMOG_2D_20220312TXX0000_ 20220312TXX0000_0001.TGZ	Forecast AUXI files missing at the time of processing

6.4 P2P Auxiliary Correction Error Check

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

0

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

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

Number of products with errors:

29

Product	Test Failed	Description
All IOP_2 products (29 products)	Dynamic Atmospheric Correction	There is an error with the Dynamic Atmospheric Correction for one or more records
CS_OFFL_SIR_IOP_220220311T234659_20220312T003638_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_220220312T003638_20220312T012614_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_220220312T012614_20220312T021553_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_220220312T021553_20220312T030529_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	
CS_OFFL_SIR_IOP_220220312T030529_20220312T035507_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_220220312T035507_20220312T044443_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_220220312T044443_20220312T053422_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_220220312T053422_20220312T062358_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_220220312T062358_20220312T071337_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_220220312T071337_20220312T080312_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_220220312T080312_20220312T085251_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_220220312T085251_20220312T094227_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_20220312T094227_20220312T103206_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_220220312T103206_20220312T112142_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_220220312T112142_20220312T121121_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_220220312T121121_20220312T130056_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_220220312T130056_20220312T135036_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_220220312T135036_20220312T144011_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_220220312T144011_20220312T152950_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_220220312T152950_20220312T161926_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_220220312T161926_20220312T170905_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_220220312T170905_20220312T175841_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_20220312T175841_20220312T184820_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20220312T184820_20220312T193755_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_20220312T193755_20220312T202734_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_220220312T202734_20220312T211710_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_20220312T211710_20220312T220649_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_220220312T220649_20220312T225624_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:

6.6 P2P Measurement Quality Flag Check

P2P Quality Flags (20 Hz)

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 (20 Hz 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 & 1 Hz 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: 29

6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20 Hz)

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:

P2P Retracking Flags PLRM

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

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

Number of products with errors:

7. IOP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	198	198	2	196	0
SIR_IOPR1B	136	101	2	98	1
SIR_IOPN1B	101	136	0	136	0
SIR_IOPM_2	198	198	140	58	0
SIR_IOPR_2	136	100	40	60	0
SIR_IOPN_2	100	136	38	97	1
SIR IOP P2P	28	28	0	27	1

7.1 QCC Errors

Number of QCC reports with errors:

11

Total number of occurrences of each error

Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	ISSOPOBHRNO	-	-	-	-	-	-
SIR_IOPN1B	0	0	0	0	1						
SIR_IOPR_2	1	1	1	1	0						
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR IOP 2	1	1	1	1							

Test Description Key:					
Abbreviation	Test name	Details			
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7			
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7			
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7			
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7			
RRTAISSOPOBHRNCE	RangeRecordTAlStartStopOPOrBlankHRNetC	The time value should be between the record TAI start/stop times of the SPH			

7.2 QCC Warnings

Number of QCC reports with warnings

1946

Total number of occurrences of each warning

Total number of occurrences of each warming							
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC
SIR_IOPM1B	196	0	0	0	0	0	0
SIR_IOPM_2	0	0	37	39	58	44	0
SIR_IOPN1B	96	0	0	0	0	0	0
SIR_IOPN_2	0	0	7	21	60	19	20
SIR_IOPR1B	132	0	0	0	0	0	0
SIR IOPR 2	0	1	29	41	96	34	28

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	33	0	33	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	12	0	0	0	12	0	20
SIR_IOPR1B	0	0	0	0	0	0	0
SIR IOPR 2	10	1	0	38	0	45	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	27	0	0	6	32	0	2
SIR IOPN1B	0	0	0	0	0	0	0

SIR_IOPN_2	0	0	16	14	23	21	8
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	38	0	4	32	42	1
Product Type	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	•	•	-
SIR_IOPM1B	1	0	0	0			
OID IODM O							
SIR_IOPM_2	1	0	0	0			
SIR_IOPM_2 SIR_IOPN1B	0	0	0 42	0			
	1 0 0	0 0	0 42 0	0 1 0			
SIR_IOPN1B	1 0 0 0	0 0 0	0 42 0 136	0 1 0 9			

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_IOP_2_	14	27	28	28	28	17	27

Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF
SIR_IOP_2_	1	15	23	16	16	28	17

Product Type	RSWHOEPNCDF	SPHLPQWNCDF	•	•	•	•	
SIR_IOP_2_	10	28					

Test Description Key:	Test Description Key:							
Abbreviation	Test name	Details						
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter						
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)						
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees						
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees						
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only						
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean						
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean						
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees						
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch						
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample						
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter						
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter						

7.3 Missing QCC Reports