

QA4EO Daily Report for IOP data:

<u>08/03/2023</u>

IDEAS-QA4E®

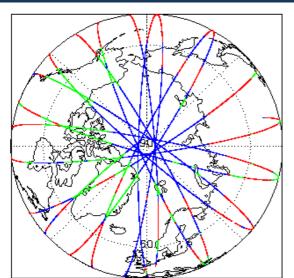
Report Production:	10 Max 0000	Che	ck	L1 & L2	P2P
Report Production:	13-Mar-2023	Server check: science	e-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	Brances and the state of the st		-pds.cryosat.esa.int	Nominal	Nominal
Processor used:	CryoSat Ocean Processor	Product Softv	ware Check	Nominal	Nominal
Dete Heady	a Used: Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	Product Forr	mat Check	Nominal	Nominal
Data Useu:		Product Head	ler Analysis	Nominal	Nominal
		Auxiliary Data File	e Usage Check	Nominal	Nominal
We would	love to hear from you!	Auxiliary Correction	on Error Check	See Section 5.4	See Section 6.4
Please let us know your feedback about these daily		Measurement Confid	dence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
quality reports: What do you like/ dislike? What quality information do you need? Send your feedback to cs2_qc_team@telespazio.com		Range, SWH & Backscatt	ter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking	g Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Wa	arning Check	See Section 7.2	See Section 7.2

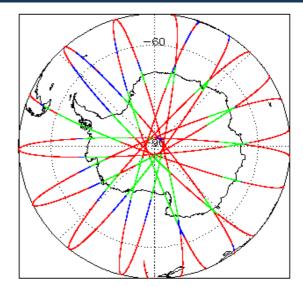
1. Overview

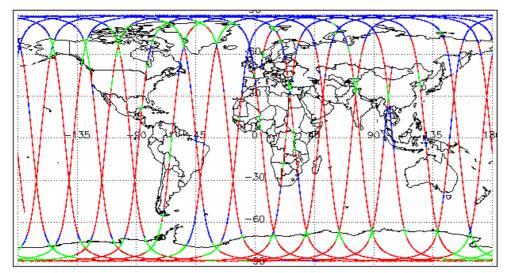
Mission / Instrument News 07-Mar-2023 None

08-Mar-2023 SIRAL unavailability on 08-Mar-2023 from 15:32:25 to 17:22:16 due to a planned orbit manoeuvre. 09-Mar-2023 Nothing planned

2. Global Coverage











3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

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

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).

4.2 L1B Product Header Analysis				
or all products, a series of pre-defined checks are performed on the MPH and	d SPH in order to identify any incons	istencies and/or errors raised by the ground-segment processing chain.		
Number of products with errors: 0				
.3 L1B Auxilary Data File Usage Check				
ach product is checked for missing Data Set Descriptors with respect to a pr	e-determined baseline and also to ch	neck the validity of Auxiliary Data Files is correct.		
Number of products with errors: 0				
4.4 L1B Auxiliary Correction Error Check				
CryoSat L1B data includes a correction error flag for each measurement recor	d. The bit value of this flag indicates	any problems when set.		
Number of products with errors: 0				
4.5 L1B Measurement Confidence Data Check				
CryoSat L1B data includes a measurement confidence flag for each measurer	ment record. The bit value of this flag	indicates any problems when set.		
• Attitude Correction Missing: This flag is currently set in error for IOPR pro update.	ducts due to a configuration issue. T	The attitude correction is actually not missing. This will be resolved in the next SW		
Number of products with errors: 2				
Product	Test Failed	Description		
CS_OFFL_SIR_IOPM1B_20230308T051830_20230308T051936_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records		
		There is an error in the scaling of the L1B waveform for one or more		

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.

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Loss of Echo Flag: This flag is currently set for products over land, but this is to be expected. The table provides the full list of products flagged.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20230308T212548_20230308T220104_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T022033_20230308T022453_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T040217_20230308T040444_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T043706_20230308T043808_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T043916_20230308T044509_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T103115_20230308T103212_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T104206_20230308T104354_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T144521_20230308T144704_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T222306_20230308T222507_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230308T235617_20230308T235738_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T054317_20230308T054425_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T054428_20230308T054647_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T080006_20230308T080111_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T084820_20230308T090025_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T120402_20230308T120844_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230308T194525_20230308T194630_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: 0

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

5.4 L2 Auxiliary Correction Error Check

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

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

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

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

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230308T070944_20230308T070950_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPM_2_20230308T221402_20230308T221547_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T012426_20230308T012724_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_20230308T012937_20230308T013458_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_20230308T021404_20230308T021459_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T022033_20230308T022453_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_20230308T030414_20230308T030649_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_20230308T035929_20230308T040042_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_20230308T043706_20230308T043808_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T043916_20230308T044509_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T053852_20230308T054114_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_20230308T062132_20230308T062324_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_20230308T071837_20230308T072311_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T080111_20230308T080249_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T090025_20230308T090556_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T094105_20230308T094449_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_20230308T112037_20230308T112354_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_20230308T112906_20230308T113031_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T121129_20230308T121224_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_20230308T130815_20230308T130922_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T152542_20230308T153102_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_20230308T180311_20230308T180629_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T201859_20230308T202507_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), 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), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOPN_2_20230308T212316_20230308T212434_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T222150_20230308T222224_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T222306_20230308T222507_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230308T230008_20230308T230317_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_20230308T235617_20230308T235738_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPR_2_20230308T003315_20230308T004027_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_20230308T004027_20230308T004243_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_20230308T021459_20230308T021922_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_20230308T021922_20230308T022033_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)

	1	
CS_OFFL_SIR_IOPR_2_20230308T035256_20230308T035710_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_20230308T035710_20230308T035929_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_20230308T053239_20230308T053852_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_20230308T071418_20230308T071836_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_20230308T084820_20230308T090025_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_20230308T103213_20230308T103959_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_20230308T121224_20230308T122242_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_20230308T135148_20230308T135909_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_20230308T153103_20230308T153225_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_20230308T184814_20230308T185649_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_20230308T202507_20230308T203406_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_20230308T220439_20230308T221100_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_20230308T221100_20230308T221402_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_20230308T221547_20230308T221744_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20230308T222224_20230308T222306_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20230308T234010_20230308T235000_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_20230308T235000_20230308T235132_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.

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230308T051830_20230308T051936_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM_2_20230308T172420_20230308T172607_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

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.

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230307T235550_20230308T003033_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_20230308T005509_20230308T005948_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_20230308T010027_20230308T011859_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_20230308T012050_20230308T012258_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_20230308T012724_20230308T012937_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_20230308T013636_20230308T020613_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_20230308T021045_20230308T021108_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_20230308T022533_20230308T024409_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_20230308T024451_20230308T025807_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_20230308T031015_20230308T031349_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_20230308T031525_20230308T033110_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_20230308T033312_20230308T034234_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_20230308T040555_20230308T040702_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_20230308T041014_20230308T042152_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_20230308T043808_20230308T043916_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_20230308T044510_20230308T044812_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_20230308T044818_20230308T045251_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_20230308T045440_20230308T050941_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_20230308T054811_20230308T055522_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_20230308T055623_20230308T062101_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_20230308T062543_20230308T063149_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_20230308T063401_20230308T070012_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_20230308T073116_20230308T073259_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_20230308T073302_20230308T080005_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_20230308T080537_20230308T080952_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_20230308T081254_20230308T084044_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_20230308T084051_20230308T084259_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_20230308T084547_20230308T084558_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_20230308T090557_20230308T093912_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_20230308T094449_20230308T095031_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_20230308T095149_20230308T095813_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_20230308T102830_20230308T102840_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_20230308T102931_20230308T103037_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_20230308T104355_20230308T111833_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_20230308T112354_20230308T112906_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_20230308T113049_20230308T115039_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_20230308T115359_20230308T115921_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_20230308T122242_20230308T125625_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_20230308T130146_20230308T130354_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_20230308T131018_20230308T133743_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_20230308T133829_20230308T134626_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_20230308T134908_20230308T135032_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_20230308T140518_20230308T141330_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_20230308T141811_20230308T141938_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_20230308T142014_20230308T142848_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_20230308T143037_20230308T143559_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_20230308T143734_20230308T144254_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_20230308T145407_20230308T150630_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_20230308T150823_20230308T151659_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_20230308T151826_20230308T152050_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_20230308T152246_20230308T152512_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_20230308T173754_20230308T175420_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_20230308T175643_20230308T180124_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_20230308T180703_20230308T183101_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_20230308T183105_20230308T184217_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_20230308T184340_20230308T184424_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_20230308T190725_20230308T193356_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_20230308T193612_20230308T194025_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_20230308T194029_20230308T194039_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_20230308T194045_20230308T194410_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_20230308T194630_20230308T201409_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_20230308T201604_20230308T201855_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_20230308T204247_20230308T204500_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_20230308T205052_20230308T211331_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_20230308T211458_20230308T211940_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_20230308T211943_20230308T212315_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_20230308T212548_20230308T220104_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_20230308T221402_20230308T221547_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_20230308T223243_20230308T223320_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_20230308T223323_20230308T223333_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_20230308T224525_20230308T224753_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_20230308T224952_20230308T225259_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_20230308T225445_20230308T230007_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_20230308T230516_20230308T232816_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_20230308T233102_20230308T234009_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_20230308T235241_20230308T235617_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_20230308T112037_20230308T112354_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_20230308T134713_20230308T134908_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_20230308T194039_20230308T194045_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_20230308T004455_20230308T005508_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_20230308T103037_20230308T103114_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_20230308T140102_20230308T140108_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_20230308T140116_20230308T140117_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_20230308T224349_20230308T224525_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.

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20230308T005948_20230308T010027_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_20230308T012426_20230308T012724_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_20230308T012937_20230308T013458_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_20230308T021404_20230308T021459_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_20230308T034234_20230308T034559_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_20230308T040217_20230308T040444_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_20230308T042153_20230308T042717_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_20230308T043916_20230308T044509_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_20230308T045251_20230308T045436_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_20230308T053852_20230308T054114_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_20230308T054136_20230308T054317_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_20230308T054647_20230308T054810_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_20230308T062132_20230308T062324_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_20230308T063149_20230308T063355_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_20230308T070013_20230308T070337_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_20230308T071837_20230308T072311_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_20230308T072904_20230308T073115_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_20230308T080410_20230308T080537_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_20230308T090025_20230308T090556_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_20230308T094105_20230308T094449_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_20230308T100726_20230308T101100_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_20230308T104206_20230308T104354_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_20230308T112037_20230308T112354_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_20230308T115040_20230308T115359_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_20230308T125752_20230308T130146_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_20230308T130815_20230308T130922_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_20230308T143600_20230308T143733_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_20230308T152542_20230308T153102_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_20230308T172729_20230308T172934_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_20230308T184425_20230308T184814_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_20230308T190345_20230308T190725_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_20230308T201859_20230308T202507_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_20230308T203407_20230308T203435_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_20230308T222150_20230308T222224_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_20230308T235617_20230308T235738_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_20230308T003315_20230308T004027_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_20230308T004027_20230308T004243_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_20230308T004455_20230308T005508_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_20230308T020613_20230308T021035_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_20230308T021459_20230308T021922_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

City Diff. Diff. 20100. 2010. 2010. 2010. 2010. 2010. 2010. 2010. 2010. 2010. 2010. 2			
CL, OHL, SHL, OHL, ZHZDOUTHOND, ZHZDOUTHOND, CH OL, OHL, SHL, OHL, ZHZDOUTHOND, ZHZDO	CS_OFFL_SIR_IOPR_2_20230308T021922_20230308T022033_C001	Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Cold Pase Site Open 2 additional Cale (Pase Site Op	CS_OFFL_SIR_IOPR_2_20230308T024410_20230308T024450_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
 C2. OFTL_SIR_DOPL_2.02.00001703/024_0200001703/024_020001 C3. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C4. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_0200001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_020001 C5. OFTL_SIR_DOPL_2.02000001703/024_0200001703/024_020001703/024_020001703/024_020001703/024_020001703/024_00001700000000000000000000000000000000	CS_OFFL_SIR_IOPR_2_20230308T025807_20230308T030413_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Cold FL Silt IOPR 2. 2020/001100012_00220001100001_00010 COLD Silt Silt IOPR 2. 2020/001100012_00220001100001_00010 COLD Silt Silt IOPR 2. 2020/001100012_00220001100001_00010 Cold FL Silt IOPR 2. 2020/001100001_00220020001100001_00010 COLD Silt Silt IOPR 2. 2020/001100001_000100001_00010 COLD Silt Silt IOPR 2. 2020/001100001_000100001_00010 COLD Silt Silt IOPR 2. 2020/001100001_00010_0001_00010 Cold FL Silt IOPR 2. 2020/001100001_00000_0000_0000_0000_0000	CS_OFFL_SIR_IOPR_2_20230308T035256_20230308T035710_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Control Control Control Control Free needs Control Control Control The Control Control The Control Control Control The Control Control Control Control The Control Control Control Control Control Control Control The Control Control Control Control Control Control The Control Control Control The Control Control Control Control The Control Contro Control Control	CS_OFFL_SIR_IOPR_2_20230308T035710_20230308T035929_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CSC OFFL SH (OFFL 2 AD20000103101 (2000001163000 (2000001163000 (2000000000000000000000000000000000	CS_OFFL_SIR_IOPR_2_20230308T040702_20230308T040948_C001		
CSC OFFL SIR JOPR 2 ACCOUNT ON AND ACCOUNT ACCOUNT AND ACCOUNT ACCOU	CS_OFFL_SIR_IOPR_2_20230308T050941_20230308T051338_C001		
CS_OFFL_SIN_OPR_2_0220000T65129_2020000T65132_020000T65132_020000T65134_02000 Provide State	CS_OFFL_SIR_IOPR_2_20230308T051338_20230308T051830_C001		
C5 OFFL_SIR_IOPR_2_022030301054195_001 Amountain Device Transmission of Control PLAN_COOL The Ocean Altimeter Range and Backacater Country Flags have been and for own more controls. C5 OFFL_SIR_IOPR_2_022030301054428_202303001054427_0001 The Ocean Altimeter Range and Backacater Country Flags have been and for own more controls. The Ocean Altimeter Range and Backacater Country Flags have been and for own more controls. C5 OFFL_SIR_IOPR_2_022030301054428_202303001054427_0001 The Machine Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_022030301054428_202303001054647_0001 The Machine Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_022030301050005_20231000105_0001 Comen Altimeter Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_02203030106005_20201 Comen Altimeter Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_02203030106005_20201 Comen Altimeter Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_022030301106025_0001 COCOD Altimeter Range SIAS, SVH And Backacater Country Flags have been and for own more controls. C6 OFFL_SIR_IOPR_2_020200301106142_023030301100025_0001 COCOD Altimeter Range SIAS, SVH And Backacater Country Flags have been and for own more controls. <td>CS_OFFL_SIR_IOPR_2_20230308T053239_20230308T053852_C001</td> <td>and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM</td> <td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td>	CS_OFFL_SIR_IOPR_2_20230308T053239_20230308T053852_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
GS_OFFL_SIR_VOPR_2_20230301004442_20230001004447_0001 and Backsteth Coality PLM_OCCO and Backsteth Coality PLM_OCCO GS_OFFL_SIR_VOPR_2_2023030107148_2023000107189_0.0001 and Backsteth Coality PLM_OCCO http://www.com/or more more of more more more more more of more more	CS_OFFL_SIR_IOPR_2_20230308T054114_20230308T054136_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
C6. OFFL_SIR_IOPR_2_20230308T07148_023308T071836_C001 and Backscatter Quality PLIM. COOG PLIM. The Ocean Alimeter Plage, SSH, SWH and Backscatter Quality Plage have been plankscatter Quality PLIM. COOG Alimeter Plange and Backscatter Quality Plage have been plankscatter Quality Plage and Backscatter Quality Plage have been plankscatter Quality Plage have been plankscatter Quality Plage have	CS_OFFL_SIR_IOPR_2_20230308T054428_20230308T054647_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_JOPR_2_202303081080006_20230081080011_C001 Ind Usada National PLRA, QCOG Miniter Ranga, SJA, SVH and Backscatter Quality PLRA, QCOG All minter Ranga, QLA, QCOG All minter Ranga, SJA, SVH and Backscatter Quality PLRA, QCOG All minter Ranga, QLA, QCOG All minter Ranga, SJA, SVH and Backscatter QLA PLRA and the QCOG Range and Backscatter QLA PLRA and the AL PLRA CS_OFFL_SIR_JOPR_2_20220308110212_20220305110259_C001 CS_OFFL_SIR_JOPR_2_202203081120247_202203081120247_202203081120247_202203081120247_202203081120247_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_20220308112047_2022030801120400_10000	CS_OFFL_SIR_IOPR_2_20230308T071418_20230308T071836_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
GS_OFFL_SIR_IOPR_2_20230308T084820_28230308T080025_C001 and Backscatter Quality PLRM, COCO Attemeter Range and Backscatter Quality PLRM, COCO Backscatter Quality PLRM, The OCOR Attemeter Range Quality PLRM, COCO Backscatter Quality PLRM, COCOR Attemeter Range Quality PLRM, The OCOR Attemeter Range Quality PLRM, COCOR Backscatter Quality PLRM, COCOR Attemeter Range Quality PLRM, The OCOR Attemeter Range Quality PLRM, COCOR Backscatter Quality The OCOR Attemeter Range Quality PLRM, COCOR Backscatter Quality The OCOR Attemeter Range SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T1012642_20230308T1012520_2001 OCOCO Attemeter Range Quality PLRM, COCOR Backscatter Quality The OCORA Attemeter Range ASHA, SWH and Backscatter Quality Flags and the OCOC Attemeter Range ASHA, SWH and Backscatter Quality Flags and the OCOC Attemeter Range ASHA, SWH and Backscatter Quality Flags and the OCOC Attemeter Range ASHA, SWH and Backscatter Quality Flags and the OCOC Attemeter Range ASHA, SWH and Backscatter Quality Flags and the OCOC Attemeter Range ASHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T102542_2001<	CS_OFFL_SIR_IOPR_2_20230308T080006_20230308T080111_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Cold_CPFL_SIR_IOPR_2_20230308T101986_32_00000T10029_C001 CCCCR Backscatter Quality more records CS_OFFL_SIR_IOPR_2_20230308T101986_2003 CCCR Backscatter Quality FLMM, CCCR Altimeter Range and Backscatter Quality FLMM, CCCR PLMM The Ocean Altimeter Range and Backscatter Quality FLMM, CCCR Altimeter Range and Backscatter Quality PLMM, CCCR Backscatter Quality FLMM, CCCR PLMM The OCCR Bange and Backscatter Quality FLMS, FLMM, CCCR Altimeter Range Quality PLMM, CCCR Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH The OCCR Bange and Backscatter Quality FLMS, FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMS, CS_OFFL_SIR_JOPR_2_20230308T102842_20230308T102839_C001 The OCCR Bange and Backscatter Quality FLMS, CCCR Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMS, Altimeter Range, SSHA, SWH, and Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMS, Altimeter Range, SSHA, SWH, and Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMS, CS_OFFL_SIR_JOPR_2_20230308T120247_20230308T120402_C001 CCCR Baltimeter Range, SSHA, SWH and Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Backscatter Quality FLMM, CCCR Altimeter Range, SSHA, SWH and Back	CS_OFFL_SIR_IOPR_2_20230308T084820_20230308T090025_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T101846_20230308T101926_C001 and Backscatter Quality PLRM_COCG Intel Outer Names Prange, SNA, SWP and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T102521_20230308T102539_C001 OCCG Altimeter Range Quality PLRM, COCG COC Altimeter Range and Backscatter Quality The OCCG Range and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T102542_20230308T102539_C001 OCCG Altimeter Range, SNA, SWP and Backscatter Quality PLRM, COCG Backscatter Quality PLRM, COCG Backscatter Quality The OCCG Range and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T102542_20230308T103259_C001 OCCG Altimeter Range, SNA, SWP and Backscatter Quality Plags have been set for one or more records The OCCG Range and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T103213_20230308T103359_C001 OCCG Altimeter Range, SNA, SWP and Backscatter Quality Plags have been set for one or more records The OCCG Range and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T12242_200308T12242_C001 OCCG Altimeter Range, SNA, SWP and Backscatter Quality Plags have been set for one or more records The OCCG Range and Backscatter Quality Plags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T121242_20230308T12242_C001 OCCG Altimeter Range, SNA, SWH and Backscatter Quality Plags have been set for one or more records The OCCG Altimeter Range, SNA, SWH and Backscatter Quality Plags	CS_OFFL_SIR_IOPR_2_20230308T095813_20230308T100259_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_IOPR_2_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081102542_202303081103559_C001 COCG Altimeter Range Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range, SSHA, SWH and Backscatter Quality FLRS and the OCCG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range and Backscatter Quality FLRS and the OCCG Altimeter Range ASHA, SWH and Backscatter Quality PLRM, OCCG Altimeter Range ASHA, SWH and Backscatter Quality FLRS and the OCCG Alti	CS_OFFL_SIR_IOPR_2_20230308T101846_20230308T101926_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T102813_20230308T103959_C001 OCCOG Backscatter Quality more records OS_OFFL_SIR_IOPR_2_20230308T103213_20230308T103959_C001 Occan Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T120247_20230308T120402_C001 OCCG Altimeter Range Quality PLRM, OCCO Altimeter Range and Backscatter Quality PLRM, OCCO Altimeter Range SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T121224_20230308T122242_C001 Ocean Altimeter Range SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T140108_2001 OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T144704_20230308T145018_C001 OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCO Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR	CS_OFFL_SIR_IOPR_2_20230308T102521_20230308T102639_C001		
CS_OFFL_SIR_IOPR_2_20230308T103213_20230308T103959_C001 and Backscatter Quality PLRM_COCOG Interformation Ratingler Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T120247_20230308T120402_C001 CCOG Altimeter Range Quality PLRM, COCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T121224_20230308T122242_C001 CCOG 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_IOPR_2_20230308T121224_20230308T122242_C001 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_IOPR_2_20230308T135148_20230308T135909_C001 Ocean Altimeter 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 CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter 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_20230308T140102_20230308T140108_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscat	CS_OFFL_SIR_IOPR_2_20230308T102642_20230308T102830_C001	OCOG Backscatter Quality	5 5 5
CS_OFFL_SIR_IOPR_2_202303081120247_202303081120402_0001 OCOG Backscatter Quality more records CS_OFFL_SIR_IOPR_2_202303081121224_202303081122242_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags Nave been set for one or more records CS_OFFL_SIR_IOPR_2_202303081135148_202303081135909_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081140102_202303081140108_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081140102_202303081140108_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081144704_202303081145018_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081144704_202303081145018_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081150630_202303081150683_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags, have been set for one or more records CS_OFFL_SIR_IOPR_2_202303081150630_202303081150683_C001 OCCG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Qua	CS_OFFL_SIR_IOPR_2_20230308T103213_20230308T103959_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T121224_20230308T122242_C001 and Backscatter Quality PLRM, OCOG The OCGA Altimeter Range and Backscatter Quality Flags and the OCGA Altimeter Range and Backscatter Quality Flags and the OCGA Altimeter Range and Backscatter Quality Flags. CS_OFFL_SIR_IOPR_2_20230308T135148_20230308T135909_C001 Ocean Altimeter Range and Backscatter Quality PLRM, OCCG The OCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCGG Altimeter Range and Backscatter Quality Flags. CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_C001 OCCG Altimeter Range Quality PLRM, OCCG The OCGG Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T140108_C001 OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T140108_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T150830_200308T150823_C001 OCCG Altimeter Range Quality PLRM, OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T151826_C001 OCCGA Altimeter Range Quality PLRM, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T151659_20230308T151826_C001 OCCGA Altimeter Range ASHA, SWH	CS_OFFL_SIR_IOPR_2_20230308T120247_20230308T120402_C001		
CS_OFFL_SIR_IOPR_2_20230308T135148_20230308T135909_C001 and Backscatter Quality PLRM, OCOG Atimeter Range and Backscatter Quality PLRM Inte Ocean Atimeter Range and Backscatter Quality and the OCOG Atimeter Range and Backscatter Quality Flags and the OCOG Atimeter Range and Backscatter Quality PLRM CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_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_20230308T144704_20230308T145018_C001 OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Atimeter Range and Backscatter Quality PLRM, PLRM The OCean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCO	CS_OFFL_SIR_IOPR_2_20230308T121224_20230308T122242_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_C001 OCOG Backscatter Quality more records CS_OFFL_SIR_IOPR_2_20230308T144704_20230308T145018_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality CS_OFFL_SIR_IOPR_2_20230308T150630_20230308T150823_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_20230308T151659_20230308T151826_C001 OCean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCean Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPR_2_20230308T135148_20230308T135909_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T144704_20230308T145018_C001 and Backscatter Quality PLRM, OCOG Atimeter Range and Backscatter Quality PLRM Inte Ocean Attimeter Range, and Backscatter Quality and the OCOG Atimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPR_2_20230308T150630_20230308T150823_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_20230308T151659_20230308T151826_C001 OCean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and	CS_OFFL_SIR_IOPR_2_20230308T140102_20230308T140108_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_IOPR_2_202303081150630_202303081150823_C001 OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been est for one or more records	CS_OFFL_SIR_IOPR_2_20230308T144704_20230308T145018_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPR_2_20230308T151659_20230308T151826_C001 Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been early on por more precords	CS_OFFL_SIR_IOPR_2_20230308T150630_20230308T150823_C001	OCOG Backscatter Quality	
PLRM	CS_OFFL_SIR_IOPR_2_20230308T151659_20230308T151826_C001	and Backscatter Quality PLRM, OCOG	

CS_OFFL_SIR_IOPR_2_20230308T173120_	_20230308T173250_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_20230308T173252_	20230308T173753_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_20230308T184814_	_20230308T185649_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_20230308T202507_	_20230308T203406_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_20230308T203436_	_20230308T203715_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_20230308T204222_	_20230308T204246_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_20230308T220231_	_20230308T220307_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_20230308T220439_	_20230308T221100_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_20230308T221547_	_20230308T221744_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_20230308T221754_	_20230308T221803_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_20230308T234010_	_20230308T235000_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 PLR	RM)				
Currently, there are several common flags	•	nich are summarised below.			
> 1 Hz and 1 Hz Ocean SSHA Quality Flags	: These flags are currently set for pr	oducts over sea ice, which is to be expecte	ed. The number of products with this error flag set is given below.		
Number of products with errors:	169				
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 measure	ment record. The bit value of this flag indica	ates any problems when set.		
> Ocean Retracking Quality Flag: This flag i	is currently set for products over land	d and sea ice, but this is to be expected. Th	ne number of products with this error flag set is given below.		
Number of products with errors:	52				
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. The number of products with this error flag set is given below.					
Number of products with errors:	127				
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: 0					
6.2 P2P Product Header Analysis					
For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.					
Number of products with errors: 0					
6.3 P2P Auxiliary Data File Usage Check					

6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

6.4 P2P Auxiliary Correction Error Check

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

0

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

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

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

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

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

Number of products with errors: 27

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220230307T234939_20230308T003916_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_20230308T003916_20230308T012854_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_220230308T012854_20230308T021831_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_220230308T021831_20230308T030808_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_220230308T030808_20230308T035745_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_220230308T035745_20230308T044723_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_220230308T044723_20230308T053700_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_220230308T053700_20230308T062638_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_220230308T062638_20230308T071615_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_220230308T071615_20230308T080553_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_220230308T080553_20230308T085529_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_220230308T085529_20230308T094507_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_220230308T094507_20230308T103444_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_220230308T103444_20230308T112422_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_20230308T112422_20230308T121359_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_220230308T121359_20230308T130336_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_220230308T130336_20230308T135313_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_220230308T135313_20230308T144251_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_220230308T144251_20230308T153228_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_220230308T180120_20230308T185057_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_220230308T185057_20230308T194035_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_220230308T194035_20230308T203012_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_220230308T203012_20230308T211950_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_220230308T211950_20230308T220927_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_220230308T220927_20230308T225905_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_220230308T225905_20230308T234841_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_220230308T234841_20230309T003819_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

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: 2		
Product	Test Failed	Description
CS_OFFL_SIR_IOP_220230308T044723_20230308T053700_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_2_20230308T171142_20230308T180120_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

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 dire below.	ctly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. The number of P2P products affected is given				
Number of products with errors:	28				
P2P Quality Flags (20 Hz PLRM)					
Since the P2P Quality Flags are copied dire below.	ctly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected. The number of P2P products affected is given				
Number of products with errors:	27				
P2P Quality Flags (1 Hz & 1 Hz PLI	RM)				
Since the P2P Quality Flags are copied dire below.	ctly from the L2 Quality Flags, please see Section 5.6 for the number of L2 products affected. The number of P2P products affected is given				
Number of products with errors:	28				
6.8 P2P Ocean Retracking Qual	ity 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:	26				
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.

0

28

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	161	161	3	158	0
SIR_IOPR1B	117	94	0	94	0
SIR_IOPN1B	94	117	0	117	0
SIR_IOPM_2	161	161	114	47	0
SIR_IOPR_2	117	94	34	60	0
SIR_IOPN_2	94	117	46	71	0
SIR_IOP_P2P	27	27	0	27	0

7.1 QCC Errors

Number of QCC reports with errors:

7.2 QCC Warnings

roduct Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	er of occurrences of ea MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCD
SIR IOPM1B	158	0	0	0	0	0	0
SIR IOPM 2	0	30	35	0	37	0	32
SIR IOPN1B	93	0	0	0	0	0	0
SIR IOPN 2	0	11	28	5	22	26	14
SIR IOPR1B	113	0	0	0	0	0	0
SIR_IOPR_2	0	22	26	0	20	15	7
		-					
roduct Type	RMSSGHOPONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCI	RPEPOPFDPLRMSINNC	DIRPEPOPFDSARNCDF	RPEPOPFDSINNC
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	1	0	26	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	0	0	14	0	28
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	4	0	30	0	36	0
	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
Product Type		0			0		0
SIR_IOPM1B	0	0	0	0	25	0	0
SIR_IOPM_2	22 0	0	0	7	0	0	4
-	0	0	21	0	48	43	28
SIR_IOPN_2	0	0	0	8	0	0	28
SIR_IOPR1B	0	29	0	1	57	28	9
SIR_IOPR_2	0	29	U	1	57	20	9
roduct Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
SIR IOPM1B	0	0	0	0	0	0	0
SIR IOPM 2	29	0	3	0	0	0	0
SIR IOPN1B	0	0	0	0	0	43	1
SIR IOPN 2	29	25	13	1	2	0	0
SIR IOPR1B	0	0	0	0	0	117	7
SIR_IOPR_2	21	32	0	1	1	0	0
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCE	
SIR_IOP_2_	15	27	27	4	27	14	26
roduct Type	RMSSGHOPONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR IOP 2	1	3	14	25	18	11	27
	+	-	ļ	ł		+	+
roduct Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-
SIR IOP 2	13	20	27	14	9	27	

SIR_IOP_2_		
Test Description Key:		
Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
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
RMSSGHOPONCDF	RangeMSSGeoidHeightOPOceanNetCDF	The MSS/geoid height should be between -106000mm and 88000mm (or missing) for surface type = ocean - NetCDF
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
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
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

Number of products with missing QCC reports:

0