

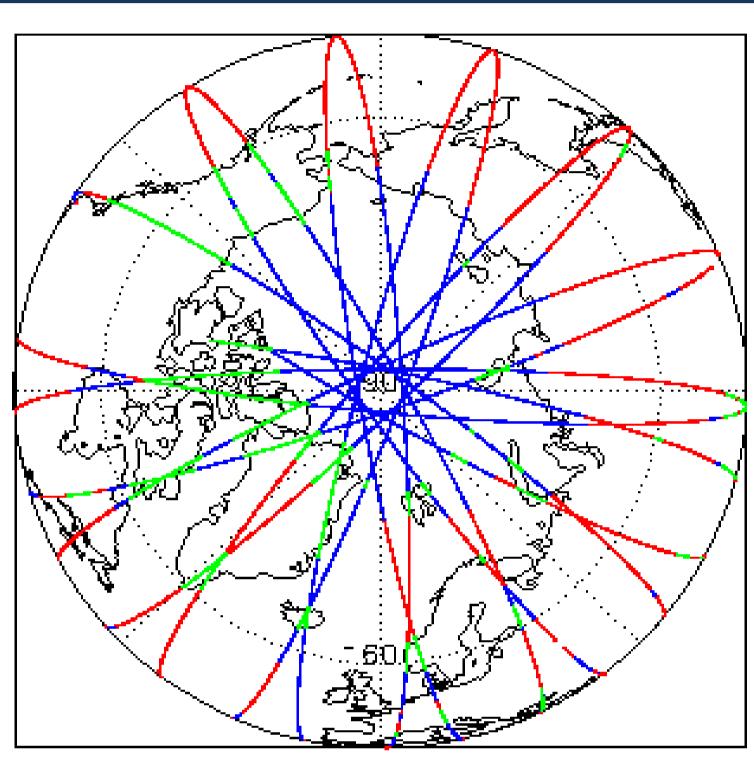
1. Overview

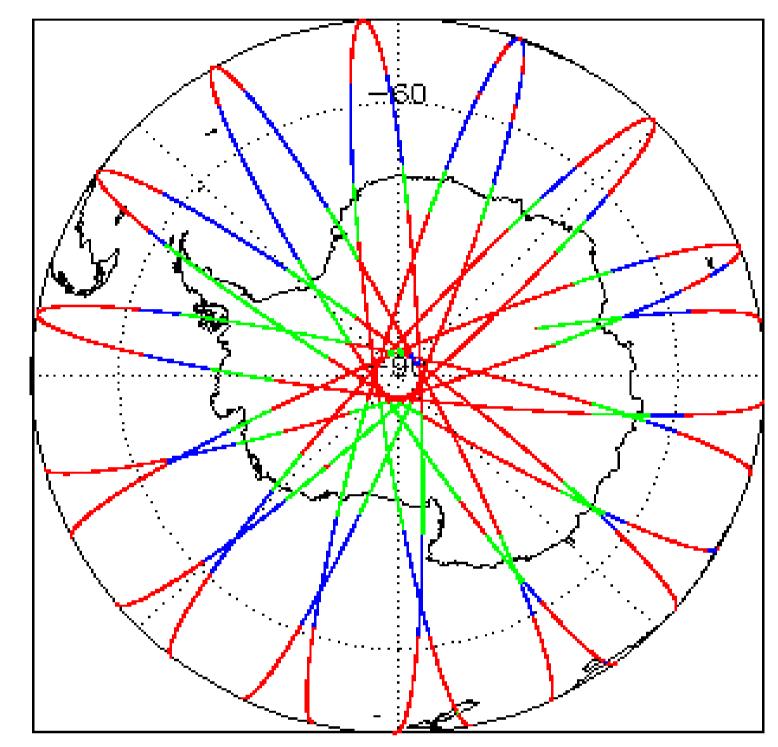
Report Production:	02-Aug-2021	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

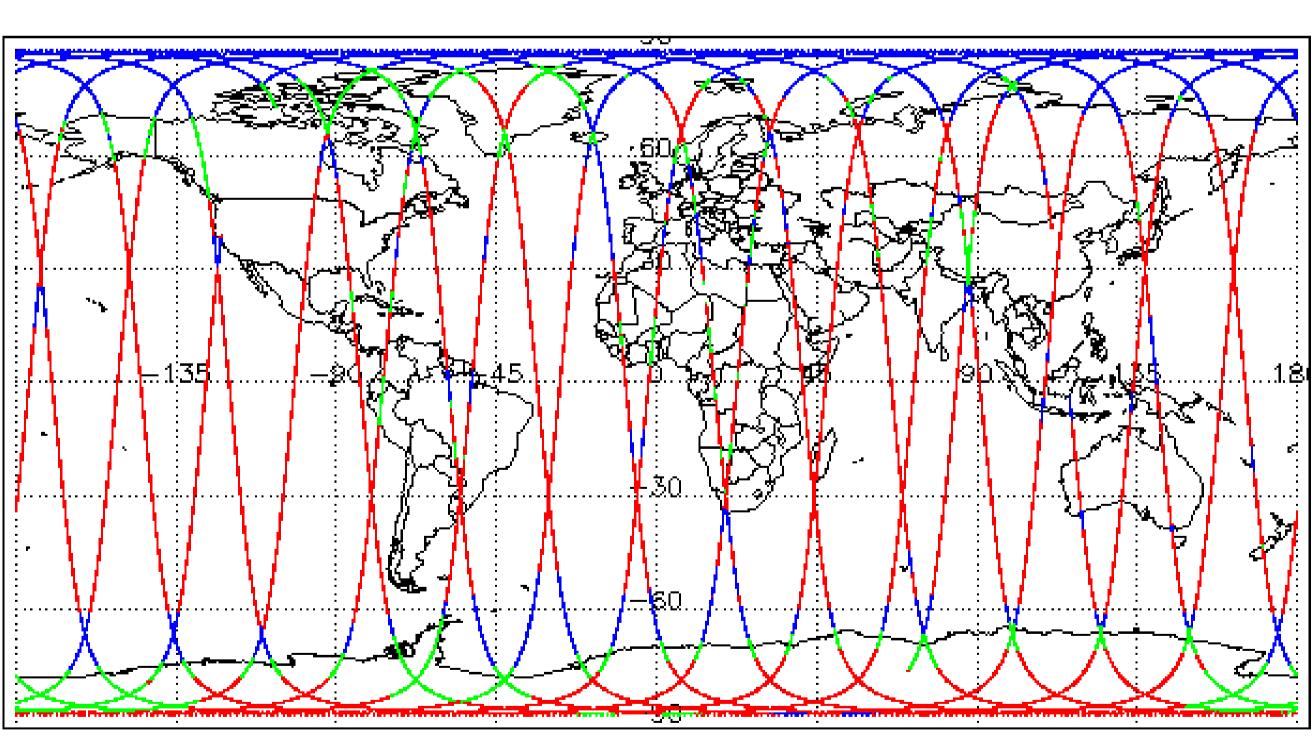
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
QCC Error/ Warning Check	See Section 7.2	See Section 7.2

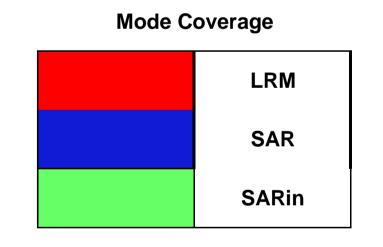
ľ	Mission / Instru	ment News
	27-Jul-2021	None
	28-Jul-2021	None
	29-Jul-2021	Due to Orbit Control Manoeuvre, SIRAL was unavailable on 29/07/2021 from 01:42:52 UTC to 03:30:45 UTC.

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

4.2 L1B Product Header Analysis

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

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

Number of products with errors:

4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

0

4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

0

4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

2

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20210728T033141_20210728T033532_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20210728T214002_20210728T215717_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

16

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20210728T015853_20210728T022521_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20210728T055952_20210728T060451_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20210728T145116_20210728T145225_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T082229_20210728T082307_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T090247_20210728T090844_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T095652_20210728T095747_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T114109_20210728T114600_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T180909_20210728T180954_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T181133_20210728T181415_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T181418_20210728T181443_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T194743_20210728T194918_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T195255_20210728T195334_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T212651_20210728T212951_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20210728T213053_20210728T213306_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210728T023807_20210728T024135_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20210728T133302_20210728T133457_C001	Loss of Echo	The tracking echo is missing for one or more records

5. IOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors: 0

5.2 L2 Product Header Analysis

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

Number of products with errors:

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

(

5.4 L2 Auxiliary Correction Error Check

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210728T114600_20210728T114644_C001	Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPM_2_20210728T200649_20210728T202112_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20210728T211056_20210728T212602_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210727T235757_20210728T000147_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T005743_20210728T005859_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T022711_20210728T022835_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T023650_20210728T023807_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T033635_20210728T033844_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T040653_20210728T040820_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T041342_20210728T041650_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_20210728T054636_20210728T054820_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T055241_20210728T055611_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_20210728T072720_20210728T072955_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_20210728T082229_20210728T082307_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_20210728T090247_20210728T090844_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_20210728T091559_20210728T091737_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T100155_20210728T100408_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_20210728T100537_20210728T100759_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T104448_20210728T104633_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T105507_20210728T105704_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T131553_20210728T131616_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T140355_20210728T140515_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T154346_20210728T154658_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_20210728T172228_20210728T172546_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_20210728T173115_20210728T173240_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_20210728T181133_20210728T181415_C001	Tide (FFS) Non-Fauilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20210728T181418_20210728T181443_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_20210728T181450_20210728T181453_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_20210728T190914_20210728T191056_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_20210728T195255_20210728T195334_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_20210728T195340_20210728T195351_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_20210728T203813_20210728T203955_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T204703_20210728T204918_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_20210728T212651_20210728T212952_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T213053_20210728T213306_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FFS) Non-Equilibrium Long Period	Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20210728T221723_20210728T221911_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20210728T222557_20210728T223045_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_20210728T230734_20210728T231131_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_20210728T000147_20210728T001013_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_20210728T013840_20210728T014623_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_20210728T031813_20210728T032432_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_20210728T032432_20210728T032703_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_20210728T033129_20210728T033141_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210728T045609_20210728T050332_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_20210728T050332_20210728T050508_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_20210728T063606_20210728T064230_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_20210728T064230_20210728T064359_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_20210728T081459_20210728T082115_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_20210728T082115_20210728T082228_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_20210728T095747_20210728T100155_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_20210728T113348_20210728T114109_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_20210728T131616_20210728T132135_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_20210728T144419_20210728T144623_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20210728T145522_20210728T150319_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_20210728T163348_20210728T164245_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_20210728T181453_20210728T182240_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_20210728T195351_20210728T195933_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_20210728T195948_20210728T200110_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	#N/A
CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_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_20210728T231131_20210728T231651_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210728T033141_20210728T033532_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOPM_2_20210728T214002_20210728T215717_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20Hz)

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20210728T002055_20210728T004546_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_20210728T004856_20210728T005359_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_20210728T005403_20210728T005412_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_20210728T010118_20210728T012741_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_20210728T012941_20210728T013235_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_20210728T014921_20210728T015545_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_20210728T015621_20210728T015842_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_20210728T015853_20210728T022521_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_20210728T022835_20210728T023313_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_20210728T023317_20210728T023649_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_20210728T024135_20210728T031435_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_20210728T032703_20210728T032948_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_20210728T035849_20210728T040128_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_20210728T040820_20210728T041341_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_20210728T042043_20210728T044148_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_20210728T044434_20210728T045609_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_20210728T050543_20210728T050956_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_20210728T052556_20210728T053044_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_20210728T053232_20210728T054243_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_20210728T054821_20210728T055241_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_20210728T055952_20210728T060451_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T060500_20210728T061030_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_20210728T061205_20210728T063606_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_20210728T065039_20210728T065554_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_20210728T065725_20210728T072021_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T073457_20210728T073615_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_20210728T073917_20210728T074526_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T074537_20210728T075447_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_20210728T075451_20210728T075609_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_20210728T080050_20210728T080757_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_20210728T082350_20210728T082711_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_20210728T082921_20210728T083511_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_20210728T083638_20210728T084454_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_20210728T085113_20210728T090152_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_20210728T091137_20210728T091558_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_20210728T091834_20210728T092443_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_20210728T092601_20210728T093238_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T101554_20210728T101822_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_20210728T101945_20210728T102258_C001	_	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T102801_20210728T104233_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T104634_20210728T105507_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_20210728T105824_20210728T112007_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_20210728T115753_20210728T122208_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_20210728T122831_20210728T123310_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_20210728T123805_20210728T124002_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPM_2_20210728T124134_20210728T130150_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_20210728T133457_20210728T140022_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_20210728T140751_20210728T141344_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_20210728T141633_20210728T143716_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_20210728T143718_20210728T144312_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_20210728T150622_20210728T153935_C001		The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20210728T154659_20210728T155216_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_20210728T155854_20210728T160037_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_20210728T162952_20210728T163348_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_20210728T164417_20210728T165502_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_20210728T165749_20210728T171902_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_20210728T172547_20210728T172701_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_20210728T172709_20210728T173115_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_20210728T173622_20210728T174620_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_20210728T174808_20210728T175420_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_20210728T175559_20210728T180042_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_20210728T182241_20210728T185745_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_20210728T190050_20210728T190602_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_20210728T190607_20210728T190613_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_20210728T191700_20210728T194742_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_20210728T194918_20210728T195149_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_20210728T200110_20210728T200647_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_20210728T200649_20210728T202112_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_20210728T202225_20210728T203725_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_20210728T203955_20210728T204459_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_20210728T204538_20210728T204703_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_20210728T205430_20210728T210437_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_20210728T211056_20210728T212602_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_20210728T214002_20210728T215717_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_20210728T215805_20210728T220047_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_20210728T220227_20210728T221600_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_20210728T221912_20210728T222411_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_20210728T222418_20210728T222431_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_20210728T223214_20210728T225434_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_20210728T225556_20210728T230419_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_20210728T233346_20210728T235432_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_20210727T235757_20210728T000147_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_20210728T001255_20210728T001316_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_20210728T013235_20210728T013840_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_20210728T052233_20210728T052556_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_20210728T164344_20210728T164416_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_20210728T232629_20210728T232729_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_20210728T144942_20210728T145116_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_20210728T185827_20210728T185907_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_20210728T204513_20210728T204516_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_20210728T231131_20210728T231651_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (20Hz PLRM)

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20210727T235757_20210728T000147_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20210728T001255_20210728T001316_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_20210728T001729_20210728T002055_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPN_2_20210728T013235_20210728T013840_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_20210728T014741_20210728T014816_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_20210728T022711_20210728T022835_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_20210728T031435_20210728T031603_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_20210728T040653_20210728T040820_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_20210728T050508_20210728T050543_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_20210728T052233_20210728T052556_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_20210728T054636_20210728T054820_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_20210728T055241_20210728T055611_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_20210728T073148_20210728T073456_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_20210728T082711_20210728T082921_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_20210728T085102_20210728T085113_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_20210728T090247_20210728T090844_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_20210728T100155_20210728T100408_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_20210728T102435_20210728T102656_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_20210728T112148_20210728T112511_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_20210728T112557_20210728T112714_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_20210728T114109_20210728T114600_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_20210728T122423_20210728T122545_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_20210728T122737_20210728T122831_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_20210728T130542_20210728T130648_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_20210728T150319_20210728T150431_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_20210728T150456_20210728T150622_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_20210728T155217_20210728T155331_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_20210728T161435_20210728T161619_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_20210728T162824_20210728T162951_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_20210728T172228_20210728T172546_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_20210728T181133_20210728T181415_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_20210728T210437_20210728T210543_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_20210728T212651_20210728T212952_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_20210728T213053_20210728T213306_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_20210728T222557_20210728T223045_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_20210728T230734_20210728T231131_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_20210728T232629_20210728T232729_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_20210728T232808_20210728T233147_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_20210728T235723_20210728T235954_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_20210728T000147_20210728T001013_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_20210728T001643_20210728T001729_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_20210728T004546_20210728T004739_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_20210728T013840_20210728T014623_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_20210728T023807_20210728T024135_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_20210728T032949_20210728T033032_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_20210728T033602_20210728T033632_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_20210728T040349_20210728T040653_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_20210728T041650_20210728T042043_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_20210728T051547_20210728T051714_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_20210728T053044_20210728T053232_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_20210728T054243_20210728T054636_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_20210728T055611_20210728T055952_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_20210728T064411_20210728T064812_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_20210728T072021_20210728T072720_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_20210728T073814_20210728T073917_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.

COUNT, SIR CHIEF 2 2010/2017 1000 2010/2017 2010 2010 2010 2010 2010 2010 2010	CS_OFFL_SIR_IOPR_2_20210728T084454_20210728T084708_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CO. OFF. DR. CERT 2. 2001/078T1 6203. 2011/278T13045 CDD OFF. DR. CERT 2. 2001/078T1 6203. 2011/278T1	CS_OFFL_SIR_IOPR_2_20210728T100408_20210728T100537_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
26. OFFL. SRI 10PR 2 22010729T19289 22010729T19280 CCC. 27. OFFL SRI 10PR 2 22010729T19287 22010729T19280 CCC. 27. OFFL SRI 10PR 2 22010729T19280 22010729T19280 CCC. 27. OFFL SRI 10PR 2 22010729T	CS_OFFL_SIR_IOPR_2_20210728T104234_20210728T104448_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Section Sect	CS_OFFL_SIR_IOPR_2_20210728T122208_20210728T122423_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
S. OFFL. 91 (JOFR. 2 20/11/24/11/48/14, 2221/04/21/14/84, COVID 1916/14/84, April 1916/24/84, April 19	CS_OFFL_SIR_IOPR_2_20210728T123527_20210728T123805_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SR_IOPS_2_2010728T145322_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T145322_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T145322_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153336_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T153318_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T153231_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152227_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152200_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152200_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152200_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T153338_20207028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T153338_2007028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T153338_2007028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T153333C007028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T150338_2007028T152331_C001 CS_OFFL_SR_IOPS_2_2010728T150338_2007028T152331_C001 CS_OFFL_SR_IOPS	CS_OFFL_SIR_IOPR_2_20210728T140022_20210728T140354_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Self-Bill (1997) 2 (2021) 72871 18322 (2021) 72871 18344 (2001) CB_OFFL_Bill_OFFL_2021 (72871 18344 (2001) 72871 18344 (2	CS_OFFL_SIR_IOPR_2_20210728T144942_20210728T145116_C001		
one flackosome Quelley PLAS. COCO. Amende Range and Bookstate Quelley PLAS. Coco PFIL. SIR. IOPR 2.20217281155352.202107281155559.0001 CS. OFFIL. SIR. IOPR 2.20217281155352.202107281100283.0001 CS. OFFIL. SIR. IOPR 2.2021728116058.202107281100283.0001 CS. OFFIL. SIR. IOPR 2.2021728116058.2021072811600200 CS. OFFIL. SIR. IOPR 2.2021728116058.2021072811600200 CS. OFFIL. SIR. IOPR 2.2021728116058.2021072811600000000000000000000000000000000000	CS_OFFL_SIR_IOPR_2_20210728T145522_20210728T150319_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
or per Backgroter Quality PLEM, COOR Statement Recognition of Backgroter Quality PLEM, COOR Statement Recognition Quality	CS_OFFL_SIR_IOPR_2_20210728T153936_20210728T154346_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCOG Backscather Quality Flags and B	CS_OFFL_SIR_IOPR_2_20210728T155332_20210728T155559_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
SS_OFFL_SIR_IOPR_2_20210728T162640_20210728T179227_C001 Allerider Range and Backscatter Quality Plant Cook Allerider Range SSHA_SWH and Backscatter Quality Plant Cook Allerider Range and Backscatter Quality Pl	CS_OFFL_SIR_IOPR_2_20210728T160038_20210728T160253_C001		
CS_OFFL_SIR_IOPR_2_20210728T173040_2010728T17222T_CD01 and Backscatter Outliny PLRM, CCOG Altmeter Range, SSHA, SWH and Backscatter Outliny PLRM, DCOG Altmeter Range and Backscatter Outliny Plags have been at for one or or records. CS_OFFL_SIR_IOPR_2_20210728T191066_20210728T191700_C001 CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211066_C001 CS_OFFL_SIR_IOP	CS_OFFL_SIR_IOPR_2_20210728T162640_20210728T162824_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscarter Quality PLRM CS_OFFL_SIR_IOPR_2_20210728T181453_20210728T182240_C001 CS_OFFL_SIR_IOPR_2_20210728T181453_20210728T182240_C001 CS_OFFL_SIR_IOPR_2_20210728T185745_20210728T185827_C001 CS_OFFL_SIR_IOPR_2_20210728T185745_20210728T185827_C001 CS_OFFL_SIR_IOPR_2_20210728T185745_20210728T185827_C001 CS_OFFL_SIR_IOPR_2_20210728T19566_20210728T191700_C001 CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204948_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T204402_C001 CS_OFFL_SIR_IOPR_2_20210728T204948_20210728T204022_C001 CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T211056_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T204948_20210728T21056_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T204948_20210728T20402206_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213907_20210728T2120226_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T216902_20210728T216905_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T216902_20210728T21722_C001 COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. COOG Altimeter Range and Backscatter Quality	CS_OFFL_SIR_IOPR_2_20210728T171902_20210728T172227_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCG Backscatter Quality Flags and Ba	CS_OFFL_SIR_IOPR_2_20210728T173240_20210728T173622_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM, CCG Allimeter Range and Backscatter Quality PLRM, CCG Allimeter Range and Backscatter Quality Plags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T2975_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T21056_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T21056_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T21056_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T2120226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T21720049_20210728T21720049 CCG_Allimeter Range_SSHA_SWH_and Backscatter Quality PLRM, CCG_Allimeter Range and Backscatter Quality Plags and the CCGG_Allimeter Rang	CS_OFFL_SIR_IOPR_2_20210728T181453_20210728T182240_C001		
CS_OFFL_SIR_IOPR_2_20210728T191056_20210728T191700_C001 Allimater Range and Backscatter Quality PLRM. (OCOGA Allimeter Range and Backscatter Quality Plags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_C001 CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T21056_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211056_C001 CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211056_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728	CS_OFFL_SIR_IOPR_2_20210728T185745_20210728T185827_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM, COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags and the COG Altimeter Range and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211056_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 COCG Altimeter Range Quality PLRM, COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the CCGG Altimeter Range and Backscatter Quality Flags and the CCGG Altimeter Range and Backscatter Quality Flags and the CCGG Altimeter Range and Backscatter Quality	CS_OFFL_SIR_IOPR_2_20210728T191056_20210728T191700_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, ocoe and thinter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211056_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20	CS_OFFL_SIR_IOPR_2_20210728T203725_20210728T203813_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_20210728T213307_20210728T214002_C001 CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_	CS_OFFL_SIR_IOPR_2_20210728T204918_20210728T205429_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728T22160	CS_OFFL_SIR_IOPR_2_20210728T210844_20210728T211056_C001	_	, ,
CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T220049_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T220226_C001 CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_C001 CS_OFFL_SIR_IOPR_2_20210728	CS_OFFL_SIR_IOPR_2_20210728T213307_20210728T214002_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCOG Backscatter Quality OCOG Backscatter Quality OCOG Backscatter Quality OCOG Backscatter Quality More records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or ocean Altimeter Range and Backscatter Quality Flags have been set for one or ocean Altimeter Range and Backscatter Quality Flags have been set for one or ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.	CS_OFFL_SIR_IOPR_2_20210728T215717_20210728T215805_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_20210728T221600_20210728T221722_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM PLRM OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the 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_20210728T220049_20210728T220226_C001		
OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_IOPR_2_20210728T221600_20210728T221722_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_202107281230420_202107281230707_C001 OCOG Backscatter Quality more records.	CS_OFFL_SIR_IOPR_2_20210728T230420_20210728T230707_C001	1	
CS_OFFL_SIR_IOPR_2_20210728T231131_20210728T231651_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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 set for one or more records.	CS_OFFL_SIR_IOPR_2_20210728T231131_20210728T231651_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been

US OFFI SIR IOPR / 20210/281231/2/ 20210/28123182/ C.001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.		
US OFFE SIR IOPR / 202107281233251 202107281233346 C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records.		
CS_OFFL_SIR_IOPR_2_20210728T235432_20210728T235722_C001	ISDA BSCRECSITOR CHISHIV DI RIVI CHICHE	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.		

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

Number of products with errors: 202

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20Hz)

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

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

Number of products with errors: 69

L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors: 150

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

6.1 P2P Product Format Check

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

Number of products with errors:

6.2 P2P Product Header Analysis

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

Number of products with errors:

6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors: 0

6.4 P2P Auxiliary Correction Error Check

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

0

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220210727T231505_20210728T000442_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220210728T000442_20210728T005420_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_220210728T005420_20210728T014357_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_220210728T014357_20210728T023334_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_220210728T023334_20210728T032311_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_220210728T032311_20210728T041249_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_220210728T041249_20210728T050226_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_220210728T050226_20210728T055203_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_220210728T055203_20210728T064141_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_220210728T064141_20210728T073118_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_220210728T073118_20210728T082055_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_220210728T082055_20210728T091033_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_220210728T091033_20210728T100010_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_220210728T100010_20210728T104947_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_220210728T104947_20210728T113925_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_220210728T113925_20210728T122902_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220210728T122902_20210728T131839_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_220210728T131839_20210728T140817_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220210728T140817_20210728T145754_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_220210728T145754_20210728T154731_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_220210728T154731_20210728T163709_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_220210728T163709_20210728T172646_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_220210728T172646_20210728T181623_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220210728T181623_20210728T190600_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_220210728T190600_20210728T195538_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_220210728T195538_20210728T204515_C001		Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more
CS_OFFL_SIR_IOP_220210728T204515_20210728T213453_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_220210728T213453_20210728T222430_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_220210728T222430_20210728T231407_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_220210728T231407_20210729T000344_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description	
CS_OFFL_SIR_IOP_220210728T032311_20210728T041249_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records	
CS_OFFL_SIR_IOP_220210728T213453_20210728T222430_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records	

6.6 P2P Measurement Quality Flag Check

P2P Quality Flags (20Hz)

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

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

Number of products with errors: 29

P2P Quality Flags (20Hz PLRM)

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

Number of products with errors: 30

P2P Quality Flags (1 Hz & 1Hz PLRM)

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

6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20Hz)

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

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

28

30

Number of products with errors:

P2P Retracking Flags PLRM

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

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

Number of products with errors:

7. OP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	159	159	3	156	0
SIR_IOPR1B	120	113	3	110	0
SIR_IOPN1B	113	120	0	120	0
SIR_IOPM_2	159	159	99	60	0
SIR_IOPR_2	120	113	45	68	0
SIR_IOPN_2	113	120	35	85	0
SIR_IOP_P2P	29	29	0	29	0

7.1 QCC Errors

Number of QCC reports with errors:

0

7.2 QCC Warnings

Number of QCC reports with warnings

2256

Total number of occurrences of each warning

Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCI	RBSZOPOEPNCDF
SIR_IOPM1B	156	0	0	0	0	0	0
SIR_IOPM_2	0	46	43	1	46	0	40
SIR_IOPN1B	110	0	0	0	0	0	0
SIR_IOPN_2	0	12	32	5	27	33	23
SIR_IOPR1B	116	0	0	0	0	0	0
SIR_IOPR_2	0	37	46	1	36	32	21

Product Type	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNCE	RPEPOPFDPLRMSINNCDI	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	38	0	0	0	0	32	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	22	0	34	0	0
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	45	0	49	0	0	44

Product Type	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	0	5	32	0	3	37	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	27	20	49	56	30	23	27
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	3	65	43	5	36	50

Product Type	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	-	-
SIR_IOPM1B	0	0	0	0			
SIR_IOPM_2	2	0	0	0			
SIR_IOPN1B	0	0	46	2			
SIR_IOPN_2	14	4	0	0			
SIR_IOPR1B	0	0	120	5			
SIR_IOPR_2	2	1	0	0			

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_IOP_2_	16	29	29	7	29	20	29

			RSSHAONCDF
SIR_IOP_2_ 20 29 24 20	29	20	26

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-	•
SIR_IOP_2_	29	21	16	29			

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				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				

RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

7.3 Missing QCC Reports

Number of products with missing QCC reports:

0