

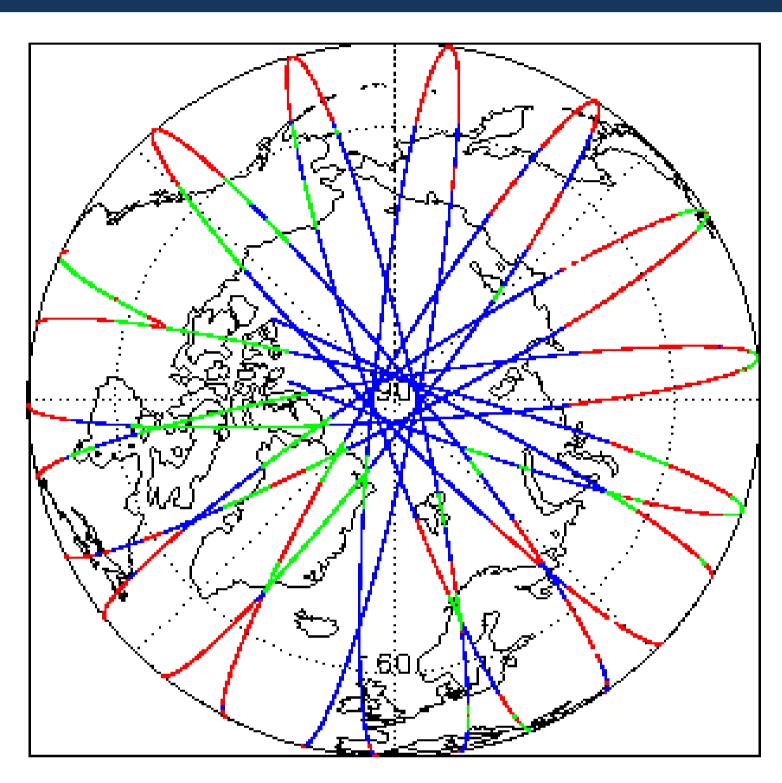
1. Overview

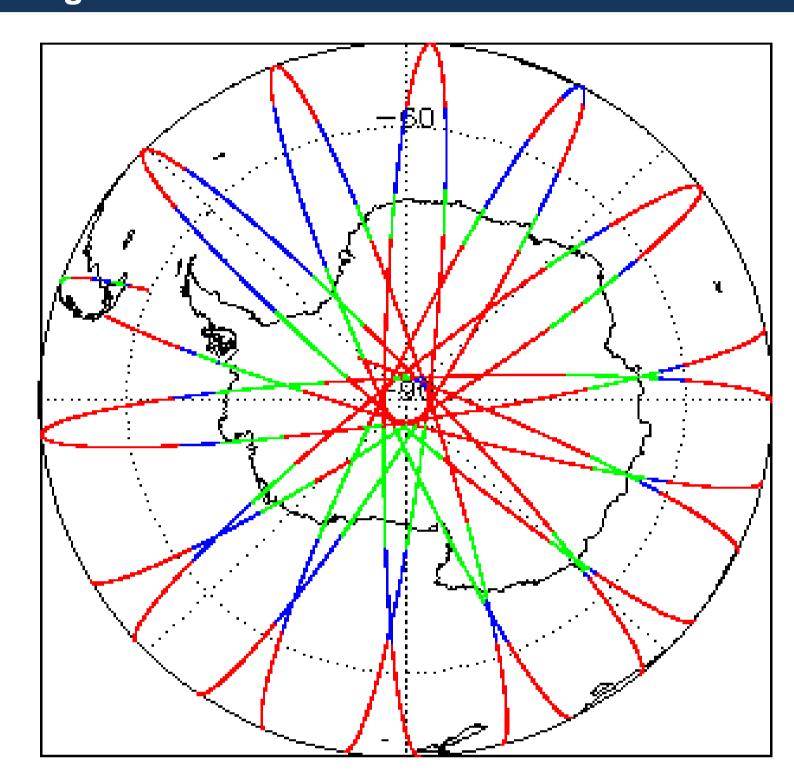
Report Production:	12-Dec-2022
Processor Used:	CryoSat Ocean Processor
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data

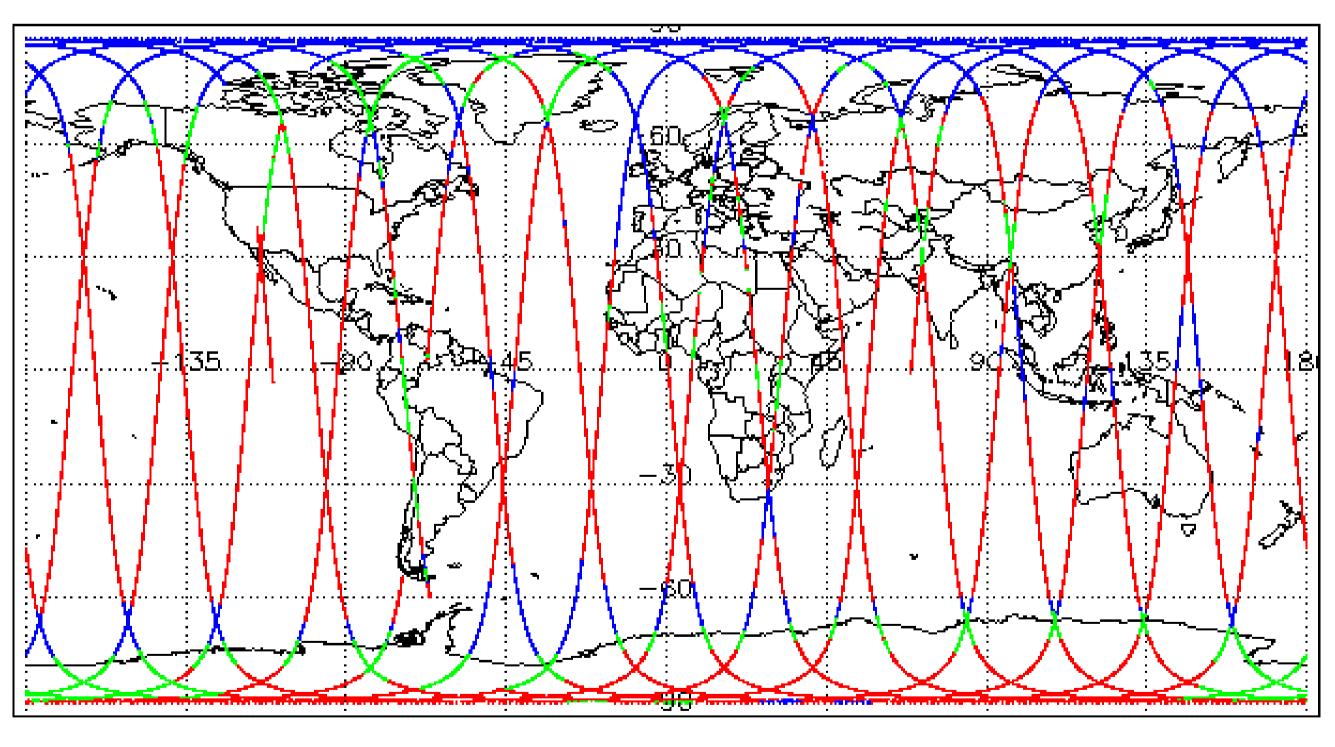
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary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

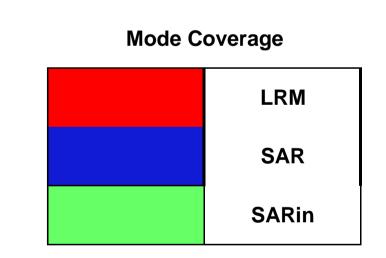
Mission / Instru	iment News
07-Dec-2022	None
08-Dec-2022	None
09-Dec-2022	Nothing planned

2. Global Coverage









3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

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.

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

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:

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4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

19

0

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20221208T062047_20221208T063550_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20221208T064235_20221208T065103_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20221208T081706_20221208T082628_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20221208T163807_20221208T164259_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20221208T203203_20221208T204230_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T034714_20221208T034740_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T070424_20221208T070909_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T075748_20221208T075926_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T084329_20221208T084439_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T102247_20221208T102840_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20221208T214827_20221208T215339_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T043742_20221208T044050_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T060203_20221208T060856_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T074249_20221208T074808_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T164512_20221208T164822_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T164822_20221208T165511_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T165633_20221208T170352_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T175315_20221208T175652_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20221208T211627_20221208T211737_C001	Loss of Echo	The tracking echo is missing for one or more records

5. IOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors: 0

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

5.4 L2 Auxiliary Correction Error Check

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

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20221207T234232_20221208T001019_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPM_2_20221208T121535_20221208T124222_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPM_2_20221208T234059_20221208T234159_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_20221208T011836_20221208T012012_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_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_20221208T042802_20221208T042921_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_20221208T043431_20221208T043741_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061135_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_20221208T061335_20221208T061906_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_20221208T070424_20221208T070909_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_20221208T074808_20221208T075044_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_20221208T084329_20221208T084439_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_20221208T102247_20221208T102840_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_20221208T110538_20221208T110726_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T111537_20221208T111801_C001	Tiviean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T134458_20221208T134914_C001	Mean Sea Surface (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T142514_20221208T142846_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_20221208T160430_20221208T160751_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_20221208T161304_20221208T161428_C001	Tiviean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T165512_20221208T165633_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_20221208T183434_20221208T183543_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_20221208T192908_20221208T193101_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_20221208T214827_20221208T215339_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_20221208T223816_20221208T224109_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T224733_20221208T225032_C001	liviean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T232821_20221208T233022_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20221208T233022_20221208T233202_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_20221208T002146_20221208T002943_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_20221208T015944_20221208T020717_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_20221208T021633_20221208T021831_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20221208T033549_20221208T034522_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_20221208T034522_20221208T034645_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_20221208T051732_20221208T052422_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_20221208T052422_20221208T052847_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_20221208T065857_20221208T070315_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_20221208T070315_20221208T070424_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_20221208T083655_20221208T083946_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20221208T083946_20221208T084329_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_20221208T101631_20221208T102247_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_20221208T115809_20221208T120259_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_20221208T133532_20221208T134458_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_20221208T151540_20221208T152353_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_20221208T165633_20221208T170352_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_20221208T183543_20221208T184304_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_20221208T195028_20221208T195242_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPR_2_20221208T201459_20221208T202159_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_20221208T215339_20221208T215943_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_20221208T233203_20221208T234059_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20 Hz)

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

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

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

Number of products with errors:

83

SOFF SIR IDPA 2 2009067784389 2009067785439 200906778553 2009067778553 200906778553 200	Product	Test Failed	Description
S. CEFL_SIR_LOPPL_2_EX2212ETIONATE_ADATASETISTS (1994 to 1995 Sept. Se	CS_OFFL_SIR_IOPM_2_20221207T234232_20221208T001019_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
Reconstruction of the Court Affirmeth Farger, SOIR, SOIT and Court Affirmeth Farger, SOIR, SOIT	CS_OFFL_SIR_IOPM_2_20221208T004219_20221208T010724_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
8. OFFL_SRI_IOPP_2_2022*209703592_2022*209703592_001 9. OFFL_SRI_IOPP_2_2022*209703591_2022*202703592_001 9. OFFL_SRI_IOPP_2_2022*209703592_2022*209703592_001 9. OFFL_SRI_IOPP_2_2022*209703592_001 9. OFFL_SRI_IOPP_2_2022*	CS_OFFL_SIR_IOPM_2_20221208T011000_20221208T011501_C001		
SOPH_SRI_OPW_2_20221087102147_00221087102393_0010	CS_OFFL_SIR_IOPM_2_20221208T012309_20221208T015624_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
SOFFL SIR IOPM 2 AUZIZIORIOSIO 3021208T02453_COCI Allerander Range and Sinderstand Country Flags throw before American Country Flags and Cocket Allerander Range and Sinderstand Country Flags and Cocket Allerander Range and Sinderstand Country Flags and the Cocket Allerander Range and Sinderstand Country Flags and Cocket Range Rang	CS_OFFL_SIR_IOPM_2_20221208T020917_20221208T021102_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Bedecoster Quality. PCOD Almeter Range and Buscatter Quality Plags have been and control of the control of	CS_OFFL_SIR_IOPM_2_20221208T022147_20221208T022853_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Superfusion (Control Control C	CS_OFFL_SIR_IOPM_2_20221208T024148_20221208T024535_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backacater Dusiliy, OCOG Altimeter Range and Backacater Dusiliy Flags nave been Ammer Range and Backacater Dusiliy Flags Ammer Range Backacater Dusiliy Flags Ammer Range and Backacater Dusiliy Flags Nave been	CS_OFFL_SIR_IOPM_2_20221208T025000_20221208T025534_C001		
And Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags have been Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags and the COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCG Altimeter Range,	CS_OFFL_SIR_IOPM_2_20221208T030216_20221208T033517_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and flaws.catter Quality, COOG Altimeter Range and Backscatter Quality Flags have been set for one or more records. S. OFFL_SIR_IOPM_2_20221208T042921_20221208T043430_C001 S. OFFL_SIR_IOPM_2_20221208T044050_20221208T051442_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. S. OFFL_SIR_IOPM_2_20221208T064423_20221208T063550_C001 S. OFFL_SIR_IOPM_2_20221208T06374_20221208T063550_C001 S. OFFL_SIR_IOPM_2_20221208T06423_20221208T063553_C001 S. OFFL_SIR_IOPM_2_20221208T06423_20221208T065531_C001 S. OFFL_SIR_IOPM_2_20221208T06423_20221208T065531_C001 Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records. S. OFFL_SIR_IOPM_2_20221208T06423_20221208T065531_C001 Ocean Altimeter Range and Backscatt	CS_OFFL_SIR_IOPM_2_20221208T034836_20221208T034942_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Backscatter Quality Coean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and flaw OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and flaw OCOG Altimeter Range, and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records S OFFL SIR IOPM 2 20221208T053907 20221208T054328 C001 S OFFL SIR IOPM 2 20221208T054323 20221208T064328 C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records S OFFL SIR JOPM 2 20221208T08135 20221208T08355 0.C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records S OFFL SIR JOPM 2 20221208T082047 20221208T08355 0.C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records S OFFL SIR JOPM 2 20221208T083710 20221208T085351 _C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records S OFFL SIR JOPM 2 20221208T085528 _20221208T085531 _C001 Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records OCOG Altimeter Range SSHA, SWH and Backscatter Quality Flags have been s	CS_OFFL_SIR_IOPM_2_20221208T040804_20221208T042432_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
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and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG SS_OFFL_SIR_IOPM_2_20221208T065526_20221208T065531_C001 CS_OFFL_SIR_IOPM_2_20221208T065526_20221208T065531_C001 CS_OFFL_SIR_IOPM_2_20221208T065650_20221208T065651_C001 CS_OFFL_SIR_IOPM_2_20221208T065650_20221208T065651_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T070935_20221208T072725_C001 CS_OFFL_SIR_IOPM_2_20221208T072850_20221208T074249_C001 And Backscatter Quality, OCOG Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Altimeter Range, SSHA, SWH And Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range, SSHA, SWH And Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records COCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPM_2_20221208T063710_20221208T063754_C001	and Backscatter Quality, OCOG	and the OCOG Altimeter Range and Backscatter Quality Flags have been
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and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or 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 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 more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or 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 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 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 more records The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
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
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
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
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
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
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
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
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
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
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
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
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
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
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
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
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
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
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
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
	Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range Quality, OCOG Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range Quality, OCOG Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range SSHA, SWH and Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocoan Altimeter Range SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Ocean Altimeter Range Quality, OCOG Altim

CS_OFFL_SIR_IOPM_2_20221208T231756_20221208T231814_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_20221208T235210_20221209T001657_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_20221208T023358_20221208T023402_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_20221208T100356_20221208T100736_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_20221208T165512_20221208T165633_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_20221208T015756_20221208T015758_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20221208T034710_20221208T034714_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_20221208T184456_20221208T184458_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (20 Hz PLRM)

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

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

Number of products with errors:

86

CS OFFL SIR IOPN 2 20221208T016930 20221208T011000 CD01 All meter Range SHA, SWH and Backscatter Quality Flags have been set for one or more records. CS OFFL SIR IOPN 2 20221208T016940 20221208T026552 CD01 CS OFFL SIR IOPN 2 20221208T026555 20221208T026552 CD01 CS OFFL SIR IOPN 2 20221208T046640 20221208T046640 CD01 CS OFFL SIR IOPN 2 20221208T046640 20221208T046640 CD01 CS OFFL SIR IOPN 2 20221208T046640 20221208T046640 CD01 CS OFFL SIR IOPN 2 20221208T04640 CD01 CS OFFL SIR	Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20221208T01838_20221208T01904_C001 and Backscatter Quality PLRM, OCOG Alimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPN_2_20221208T01838_20221208T019344_C001 CS_OFFL_SIR_IOPN_2_20221208T01840_20221208T019344_C001 CS_OFFL_SIR_IOPN_2_20221208T01840_20221208T019344_C001 CS_OFFL_SIR_IOPN_2_20221208T019340_20221208T019344_C001 CS_OFFL_SIR_IOPN_2_20221208T02863_20221208T028227_C001 CS_OFFL_SIR_IOPN_2_20221208T02863_20221208T028227_C001 CS_OFFL_SIR_IOPN_2_20221208T034842_20221208T035057_C001 CS_OFFL_SIR_IOPN_2_20221208T034842_20221208T048844 C001 CS_OFFL_SIR_IOPN_2_20221208T034842_20221208T048844 C001 CS_OFFL_SIR_IOPN_2_20221208T046828_20221208T048844 C001 CS_OFFL_SIR_IOPN_2_20221208T06958_20221208T048844 C001 CS_OFFL_SIR_IOPN_2_20221208T06958_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06958_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06058_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06058_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06058_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06058_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06135_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06058_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_20221208T06135_20221208T061935_C001 CS_OFFL_SIR_IOPN_2_	CS_OFFL_SIR_IOPN_2_20221208T003755_20221208T003839_C001		
and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM and Backscatter Quality PLRM and Backscatter Quality PLRM and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Ra	CS_OFFL_SIR_IOPN_2_20221208T010830_20221208T011000_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, SPHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_C001 CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_C001 CS_OFFL_SIR_IOPN_2_20221208T035555_20221208T025852_C001 CS_OFFL_SIR_IOPN_2_20221208T035555_20221208T035057_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T060556_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 COCG_Altimeter Range Quality PLRM, COCG_Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CCG_Altimeter Range Quality PLRM, COCG_Altimeter Range and Backscatter Quality F	CS_OFFL_SIR_IOPN_2_20221208T011836_20221208T012012_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 CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_C001 CS_OFFL_SIR_IOPN_2_20221208T034942_20221208T035057_C001 CS_OFFL_SIR_IOPN_2_20221208T034942_20221208T035057_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061135_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T07748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T07748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T07748_20221208T075926_C001 CCG_Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocoan Altime	CS_OFFL_SIR_IOPN_2_20221208T015840_20221208T015944_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_C001 and Backscatter Quality PLRM, COG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags and the OCG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061135_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CCGG Altimeter Range Quality PLRM, COGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CCGG Altimeter Range Quality PLRM, COGG Altimeter Range and Backscatter Quality Flags have been set for one or more records CCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records CCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records CCGG Altimeter Range and Backscatter Quality Flags have been set for one or more records CCGG Altimeter Range and Backscatter Quality Flags h	CS_OFFL_SIR_IOPN_2_20221208T022853_20221208T023227_C001		
CS_OFFL_SIR_IOPN_2_20221208T034942_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061135_C001 CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 and Backscatter Quality PLRM, COG Altimeter Range and Backscatter Quality PLRM, COG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Plags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Range and Backscatter Quality Flags and the OCOG Range and Backscatter Quality Flags and	CS_OFFL_SIR_IOPN_2_20221208T025535_20221208T025852_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 The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The Ocoan 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20221208T034942_20221208T035057_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20221208T060856_20221208T061135_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T075748_20221208T075926_C001 And Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20221208T040628_20221208T040804_C001		
CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 And Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG 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_IOPN_2_20221208T060856_20221208T061135_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 The Ocean Altimeter Range and Backscatter Quality Flags have been set for one or 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 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 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 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 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 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 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 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 and Backscatter Quality Flags have	CS_OFFL_SIR_IOPN_2_20221208T061335_20221208T061906_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM PLRM OCOG Altimeter Range Quality PLRM The OCOG Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_IOPN_2_20221208T070424_20221208T070909_C001		
OCOG Altimeter Range Quality PLRM The OCOG Range and Backscatter Quality Flags have been set for one or	CS_OFFL_SIR_IOPN_2_20221208T075748_20221208T075926_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20221208T082628_20221208T082915_C001 OCOG Backscatter Quality more records	CS_OFFL_SIR_IOPN_2_20221208T082628_20221208T082915_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_20221208T102247_20221208T102840_C001 OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20221208T102247_20221208T102840_C001		, ,
CS_OFFL_SIR_IOPN_2_20221208T114322_20221208T114429_C001 OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20221208T114322_20221208T114429_C001		

CS_OFFL_SIR_IOPN_2_20221208T120754_20221208T120917_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_20221208T120939_20221208T121457_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_20221208T145248_20221208T145421_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_20221208T150341_20221208T150519_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_20221208T151211_20221208T151312_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_20221208T163445_20221208T163807_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20221208T174142_20221208T174403_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_20221208T175206_20221208T175314_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Bange, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH 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_20221208T191953_20221208T192132_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_20221208T192908_20221208T193101_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_20221208T202836_20221208T203203_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_20221208T205911_20221208T210059_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_20221208T211546_20221208T211627_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_20221208T212013_20221208T212316_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_20221208T212628_20221208T213153_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_20221208T214827_20221208T215339_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_20221208T223816_20221208T224109_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_20221208T224733_20221208T225032_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_20221208T233022_20221208T233202_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
CS_OFFL_SIR_IOPN_2_20221208T233022_20221208T233202_C001 CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range 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 The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001 CS_OFFL_SIR_IOPN_2_20221208T234758_20221208T235018_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001 CS_OFFL_SIR_IOPN_2_20221208T234758_20221208T235018_C001 CS_OFFL_SIR_IOPR_2_20221208T002146_20221208T002943_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001 CS_OFFL_SIR_IOPN_2_20221208T234758_20221208T235018_C001 CS_OFFL_SIR_IOPR_2_20221208T002146_20221208T002943_C001 CS_OFFL_SIR_IOPR_2_20221208T002943_20221208T003137_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocog Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20221208T234159_20221208T234321_C001 CS_OFFL_SIR_IOPN_2_20221208T234758_20221208T235018_C001 CS_OFFL_SIR_IOPR_2_20221208T002146_20221208T002943_C001 CS_OFFL_SIR_IOPR_2_20221208T002943_20221208T003137_C001 CS_OFFL_SIR_IOPR_2_20221208T012012_20221208T012309_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags 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 The OCOG Range and Backscatter Quality Flags have been set for one or more records The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPR_2_20221208T024535_20221208T024844_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_20221208T033549_20221208T034522_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_20221208T034522_20221208T034645_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_20221208T035108_20221208T035422_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_20221208T042432_20221208T042802_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_20221208T043742_20221208T044050_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_20221208T051732_20221208T052422_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_20221208T052422_20221208T052847_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_20221208T060203_20221208T060856_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_20221208T063550_20221208T063710_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_20221208T065412_20221208T065437_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_20221208T065707_20221208T065828_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_20221208T065857_20221208T070315_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_20221208T070315_20221208T070424_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_20221208T083946_20221208T084329_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_20221208T084716_20221208T084934_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_20221208T085039_20221208T085217_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_20221208T095513_20221208T100017_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_20221208T101631_20221208T102247_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_20221208T102840_20221208T103133_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_20221208T110421_20221208T110538_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_20221208T115641_20221208T115737_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_20221208T115809_20221208T120259_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_20221208T133215_20221208T133329_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_20221208T133532_20221208T134458_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_20221208T142136_20221208T142514_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_20221208T143535_20221208T143731_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_20221208T150841_20221208T151205_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_20221208T151540_20221208T152353_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_20221208T160130_20221208T160430_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_20221208T161428_20221208T161743_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_20221208T164822_20221208T165512_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_20221208T165633_20221208T170352_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_20221208T174805_20221208T174809_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_20221208T175315_20221208T175652_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_20221208T183543_20221208T184304_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_20221208T193102_20221208T193733_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_20221208T200928_20221208T201234_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_20221208T201459_20221208T202159_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_20221208T213309_20221208T213400_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_20221208T214616_20221208T214827_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_20221208T215339_20221208T215943_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_20221208T215945_20221208T220052_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_20221208T223710_20221208T223816_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_20221208T233203_20221208T234059_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (1 Hz & 1 Hz PLRM)

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

183

> 1 Hz and 1 Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected. The number of products with this error flag set is given below.

Number of products with errors:

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20 Hz)

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

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

Number of products with errors: 60

L2 Retracking Flags (20 Hz PLRM)

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

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

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:

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).

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

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

Number of products with errors: 30

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220221207T233600_20221208T002536_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_220221208T002536_20221208T011515_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_220221208T011515_20221208T020451_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_220221208T020451_20221208T025430_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_220221208T025430_20221208T034405_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_220221208T034405_20221208T043344_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_220221208T043344_20221208T052320_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	Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220221208T052320_20221208T061259_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_220221208T061259_20221208T070235_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_220221208T070235_20221208T075214_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_220221208T075214_20221208T084149_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_220221208T084149_20221208T093128_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_220221208T093128_20221208T102104_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_220221208T102104_20221208T111043_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_220221208T111043_20221208T120019_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_220221208T120019_20221208T124958_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_220221208T124958_20221208T133934_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_220221208T133934_20221208T142913_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_220221208T142913_20221208T151848_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_220221208T151848_20221208T160827_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_220221208T160827_20221208T165803_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_220221208T165803_20221208T174742_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_220221208T174742_20221208T183718_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_220221208T183718_20221208T192656_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_220221208T192656_20221208T201632_C001		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_220221208T201632_20221208T210611_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_220221208T210611_20221208T215547_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_220221208T215547_20221208T224526_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_220221208T224526_20221208T233502_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_220221208T233502_20221209T002441_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:

6.6 P2P Measurement Quality Flag Check

P2P Quality Flags (20 Hz)

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

0

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. The number of P2P products affected is given below.

Number of products with errors: 30

P2P Quality Flags (20 Hz PLRM)

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

Number of products with errors: 30

P2P Quality Flags (1 Hz & 1 Hz PLRM)

Since the P2P Quality Flags are copied directly from the L2 Quality Flags, please see Section 5.6 for the number of L2 products affected. The number of P2P products affected is given below.

Number of products with errors: 30

6.8 P2P Ocean Retracking Quality Check

P2P Retracking Flags (20 Hz)

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

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

Number of products with errors: 29

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: 30

7. IOP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	204	204	2	202	0
SIR_IOPR1B	128	100	3	97	0
SIR_IOPN1B	100	128	0	128	0
SIR_IOPM_2	207	207	151	56	0
SIR_IOPR_2	128	100	39	61	0
SIR_IOPN_2	100	128	37	91	0
SIR IOP P2P	29	29	0	29	0

7.1 QCC Errors

Number of QCC reports with errors:

0

7.2 QCC Warnings

Total number of occurrences of each warning

Product Type	BCSHNCDF	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	DRBSZOPOEPNCDF
SIR_IOPM1B	201	0	0	0	0	0	0
SIR_IOPM_2	0	39	42	0	48	0	39
SIR_IOPN1B	95	0	0	0	0	0	0
SIR_IOPN_2	0	7	29	3	21	24	10
SIR_IOPR1B	125	0	0	0	0	0	0
SIR_IOPR_2	0	35	52	1	27	21	9

Product Type	RLPTONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC	RPEPOPFDPLRMSINNCD	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	2	1	34	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	30	1	0	0	22	0	31
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	36	6	0	54	0	60	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	30	0	0	7	28	0	5
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	25	13	36	49	29
SIR_IOPR1B	0	0	0	0	0	0	0
SIR IOPR 2	0	52	0	1	72	44	12

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF
SIR_IOPM1B	0	0	0	1	1	0	0
SIR_IOPM_2	33	0	4	1	1	0	0
SIR_IOPN1B	0	0	0	0	0	0	43
SIR_IOPN_2	25	31	10	0	0	1	0
SIR_IOPR1B	0	0	0	0	0	0	128
SIR_IOPR_2	40	53	1	0	0	2	0

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_IOP_2_	11	29	29	3	29	18	29

Product Type F	RLPTONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCDI	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
SIR_IOP_2_	29	6	18	29	24	15	29

Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-
SIR IOP 2	17	26	29	19	11	29	

Test Description Key: Abbreviation Part name		
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
RLPTONCDF	RangeLongPeriodTideOceanNetCDF	The Long period tide height should be between -50mm and 50mm (or missing) for surface type = ocean - NetCDF
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v2_NetCDF	Rel_Time_ASC_Node_Start mismatch (DBL ASC, rounded up to 0.1)
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter

7.3 Missing QCC Reports

Number of products with missing QCC reports:

L1B and L2 Product name

n/o

P2P Product name

CS_OFFL_SIR_IOP_2__20221208T233502_20221209T002441_C002