

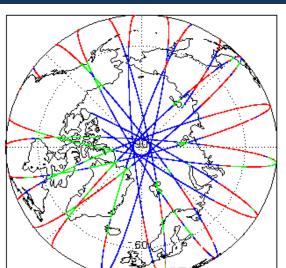
QA4EO Daily Report for IOP data:

<u>31/12/2021</u>

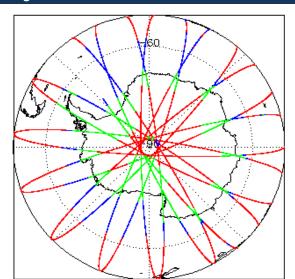
	07 Inn 2022	Check	L1 & L2	P2P
Report Production:	07-Jan-2022	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Due eee eu llee du		Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Dete Used:	Intermediate Ocean Products (IOP)	Product Format Check	Nominal	Nominal
Data Used:	L1B, L2 & P2P Science Data	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 7.1 and 7.2	See Section 7.1 and 7.

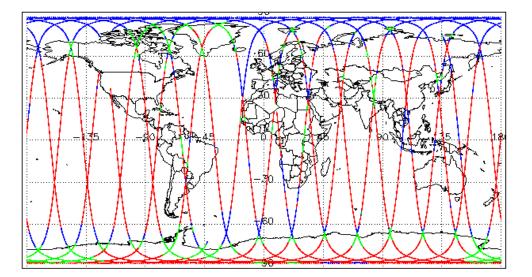
1. Overview

Mission / Instru	Mission / Instrument News		
30-Dec-2021	None		
31-Dec-2021	None		
01-Jan-2022	Nothing planned		













3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

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

4. IOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

For all products, a series of pre-defined checks are performed on the MPH ar		
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1 OSARIn chains. A modification is required in the next release.	IB IOPR and IOPN products beca	use the I1b_processing_quality_hr field is not correctly configured in the OSAR an
Number of products with errors: 0		
4.3 L1B Auxilary Data File Usage Check		
Each product is checked for missing Data Set Descriptors with respect to a p	re-determined baseline and also t	o check the validity of Auxiliary Data Files is correct.
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
CryoSat L1B data includes a correction error flag for each measurement reco	rd. The bit value of this flag indica	ates any problems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measure	ment record. The hit value of this	flag indicates any problems when set
		• • • •
Attitude Correction Missing: This flag is currently set in error for IOPR prod	lucts due to a configuration issue.	This is being investigated and will be updated in the next Svv update.
Number of products with errors: 0		
4.6 L1B Waveform Group Data Check		
•	rd. The bit value of this flag indica	tes any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement reco	-	tes any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement recouses of Echo Flag: This flag is currently set for products over land, but this is	-	tes any problems when set.
CryoSat L1B data includes a waveform data flag for each measurement recorsors of Echo Flag: This flag is currently set for products over land, but this in Number of products with errors: 15	-	tes any problems when set. Description
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this in Number of products with errors: 15 Product	s to be expected.	
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this in Number of products with errors: 15 Product CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001	s to be expected.	Description
CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this in Number of products with errors: 15 Product CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001 CS_OFFL_SIR_IOPM1B_20211231T073942_20211231T081334_C001	s to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records
CryoSat L1B data includes a waveform data flag for each measurement recor- coss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15 Product CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001 CS_OFFL_SIR_IOPM1B_20211231T073942_20211231T081334_C001 CS_OFFL_SIR_IOPM1B_20211231T160539_20211231T162623_C001	s to be expected. Test Failed Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records
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CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15 Product CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001 CS_OFFL_SIR_IOPM1B_20211231T073942_20211231T081334_C001 CS_OFFL_SIR_IOPM1B_20211231T160539_20211231T162623_C001 CS_OFFL_SIR_IOPN1B_20211231T005552_20211231T005711_C001 CS_OFFL_SIR_IOPN1B_20211231T023527_20211231T023735_C001	s to be expected. Test Failed Loss of Echo Loss of Echo Loss of Echo Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
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CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15 Product CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001 CS_OFFL_SIR_IOPM1B_20211231T073942_20211231T081334_C001 CS_OFFL_SIR_IOPM1B_20211231T07552_20211231T08553_C001 CS_OFFL_SIR_IOPM1B_20211231T005552_20211231T005711_C001 CS_OFFL_SIR_IOPN1B_20211231T023527_20211231T023735_C001 CS_OFFL_SIR_IOPN1B_20211231T041440_20211231T04817_C001 CS_OFFL_SIR_IOPN1B_20211231T104407_20211231T104817_C001 CS_OFFL_SIR_IOPN1B_20211231T104407_20211231T104817_C001 CS_OFFL_SIR_IOPN1B_20211231T104407_20211231T104817_C001 CS_OFFL_SIR_IOPN1B_20211231T1404407_20211231T104817_C001 CS_OFFL_SIR_IOPN1B_20211231T140447_20211231T140338_C001 CS_OFFL_SIR_IOPN1B_20211231T140416_20211231T140627_C001 CS_OFFL_SIR_IOPN1B_20211231T140416_20211231T140553_C001	s to be expected. Test Failed Loss of Echo	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
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4.6 L1B Waveform Group Data Check CryoSat L1B data includes a waveform data flag for each measurement record Loss of Echo Flag: This flag is currently set for products over land, but this is Number of products with errors: 15 Product 15 CS_OFFL_SIR_IOPM1B_20211231T072613_20211231T072705_C001 CS_OFFL_SIR_IOPM1B_20211231T073942_20211231T081334_C001 CS_OFFL_SIR_IOPM1B_20211231T05552_20211231T06233_C001 CS_OFFL_SIR_IOPN1B_20211231T005552_20211231T005711_C001 CS_OFFL_SIR_IOPN1B_20211231T023527_20211231T041926_C001 CS_OFFL_SIR_IOPN1B_20211231T041440_20211231T1041926_C001 CS_OFFL_SIR_IOPN1B_20211231T122621_20211231T1041926_C001 CS_OFFL_SIR_IOPN1B_20211231T122621_20211231T10417_C001 CS_OFFL_SIR_IOPN1B_20211231T140407_20211231T104817_C001 CS_OFFL_SIR_IOPN1B_20211231T14042_20211231T104553_C001 CS_OFFL_SIR_IOPN1B_20211231T140416_20211231T140627_C001 CS_OFFL_SIR_IOPN1B_20211231T140416_20211231T140553_C001 CS_OFFL_SIR_IOPN1B_20211231T140417_20211231T105553_C001 CS_OFFL_SIR_IOPR1B_20211231T140416_20211231T105553_C001 CS_OFFL_SIR_IOPR1B_20211231T140417_20211231T105553_C001 CS_OFFL_SIR_IOPR1B_20211231T14042_20211231T105553_C001	s to be expected. Test Failed Loss of Echo <	Description The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records

5. IOP Level 2 Data Quality Check

The tracking echo is missing for one or more records

Loss of Echo

5.1 L2 Product Format Check

CS_OFFL_SIR_IOPR1B_20211231T230309_20211231T231008_C001

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL). 0

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors:

5.3 L2 Auxiliary Data File Usage Check

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

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).

0

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

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

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

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20211231T071930_20211231T072031_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T000042_20211231T000317_C001	Mean Sea Surface (1), Mean 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_20211231T005552_20211231T005711_C001	Mean Sea Surface (1), Mean 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_20211231T013551_20211231T014158_C001	Mean Sea Surface (1), Mean 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_20211231T023527_20211231T023735_C001	Mean Sea Surface (1), Mean 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_20211231T031806_20211231T031941_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T032835_20211231T033036_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T041440_20211231T041926_C001	Mean Sea Surface (1), Mean 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_20211231T050624_20211231T050853_C001	Mean Sea Surface (1), Mean 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_20211231T063722_20211231T064114_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc 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_20211231T072749_20211231T072846_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T081707_20211231T082021_C001	Mean Sea Surface (1), Mean 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_20211231T082536_20211231T082648_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T095432_20211231T095855_C001	Mean Sea Surface (1), Mean 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_20211231T100439_20211231T100559_C001	Mean Sea Surface (1), Mean 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_20211231T104233_20211231T104325_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T104407_20211231T104817_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20211231T114214_20211231T114402_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T122621_20211231T122722_C001	Mean Sea Surface (1), Mean 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_20211231T132021_20211231T132246_C001	Mean Sea Surface (1), Mean 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_20211231T145026_20211231T145244_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T145924_20211231T150348_C001	Mean Sea Surface (1), Mean 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_20211231T163045_20211231T163317_C001	Mean Sea Surface (1), Mean 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_20211231T164040_20211231T164223_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T190824_20211231T190848_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T194948_20211231T195106_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T195637_20211231T195955_C001	Mean Sea Surface (1), Mean 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_20211231T204751_20211231T204840_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20211231T212910_20211231T213025_C001	Mean Sea Surface (1), Mean 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_20211231T213535_20211231T213848_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc 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_20211231T231008_20211231T231150_C001	Mean Sea Surface (1), Mean 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_20211231T231439_20211231T232017_C001	Mean Sea Surface (1), Mean 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_20211231T004917_20211231T005436_C001	Mean Sea Surface (1), Mean 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_20211231T005436_20211231T005552_C001	Mean Sea Surface (1), Mean 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_20211231T023154_20211231T023527_C001	Mean Sea Surface (1), Mean 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_20211231T040649_20211231T040717_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20211231T040717_20211231T041440_C001	Mean Sea Surface (1), Mean 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_20211231T054522_20211231T0555513_C001	Mean Sea Surface (1), Mean 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_20211231T071752_20211231T071929_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20211231T072847_20211231T073635_C001	Mean Sea Surface (1), Mean 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_20211231T090532_20211231T091904_C001	Mean Sea Surface (1), Mean 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_20211231T104817_20211231T105553_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_0FFL_SIR_I0PR_2_20211231T122722_20211231T123252_C001	Mean Sea Surface (1), Mean 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_20211231T135622_20211231T135755_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20211231T140628_20211231T141318_C001	Mean Sea Surface (1), Mean 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_20211231T154451_20211231T155003_C001	Mean Sea Surface (1), Mean 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_20211231T155037_20211231T155203_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20211231T172235_20211231T173023_C001	Mean Sea Surface (1), Mean 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_20211231T190055_20211231T190824_C001	Mean Sea Surface (1), Mean 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_20211231T191735_20211231T191931_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20211231T203634_20211231T204629_C001	Mean Sea Surface (1), Mean 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_20211231T204629_20211231T204751_C001	Mean Sea Surface (1), Mean 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_20211231T221859_20211231T222529_C001	Mean Sea Surface (1), Mean 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_20211231T222529_20211231T224014_C001	Mean Sea 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. 0

Number of products with errors:

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20Hz)

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

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

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

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

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Product	Test Failed	Description
	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_20211231T000734_20211231T001002_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_20211231T001208_20211231T001636_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T001728_20211231T002838_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPM_2_20211231T00206_20211231T00206_0001 Ocean Attender Dangy Charlos Status Color Attender Dang Charlos Status Color Attender Dang Charlos Status Color Attender Dangy Charlos Status Color Attender Dang Charlos Status Color Attender Barge and Backscatter Charlos Color Attender Dang Charlos Status Color Attender Dang Charl	
Des_DPPL_SPL_OPPL_2_A0211231104580_00211231104590_0001 Backstatte Gualay tor one or more records. 05_0FPL_SIR_JOPPL_2_20211231101233_022112311011517_0001 Deam Altmeter Range, SSH, SVM and Backstatter Gualay and Backstatter Gualay The COGM Altmeter Range and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_202112311011200_020112311011501_0001 Deam Altmeter Range and Backstatter Gualay The COGM Altmeter Range and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_2021123110114198_02011231101409_0001 DCGO Altmeter Range Gualay, COGO The OCGM Altmeter Range and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_202112311014198_02011231101409_0001 DCGO Altmeter Range Gualay, COGO The OCGO Altmeter Range and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_202112311014198_02011231101409_0001 DCGO Altmeter Range, SSH, SWH and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_202112311014198_020112311024000_0001 DCGO Altmeter Range, SSH, SWH and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_202112311015140_002112311024000_0001 DCGO Altmeter Range, SSH, SWH and Backstatter Gualay 05_0FPL_SIR_JOPPL_2_20211231102514_02011231102400_0001 DCGO Altmeter Range, SSH, SWH and Backstatter Gualay 06_0FPL_SIR_JOPPL_2_20211231102514_020121231102414_0001 DCGO Altmeter Range and Backstatter Gualay 06_0FPL_SIR_JOPPL_2_20211231102507_202112311025140_0001 DCGO Altmeter Range and Backstatter Gualay 06_0FPL_SIR_JOPPL_2_202	
CS_OFFL_SIR_JOPM_2_00211231T010233_00211231T011817_C001 and Backscatter Quality, COC0 Bittender Range all Backscatter Quality and the COC0 Allmeter Range, S3HA, SVM and Backscatter Quality and the COC0 Allmeter Range and Backscatter Quality CS_OFFL_SIR_JOPM_2_00211231T01469_0021 Ocean Allmeter Range Quality, COC0 Backscatter Quality The Ocean Allmeter Range and Backscatter Quality and the COC0 Allmeter Range and Backscatter Quality CS_OFFL_SIR_JOPM_2_00211231T01469_0021 OCG6 Allmeter Range Quality, COC0 Backscatter Quality The OCG6 Allmeter Range and Backscatter Quality Flage have tor one or more records. CS_OFFL_SIR_JOPM_2_00211231T01469_0021 OCG6 Allmeter Range Quality, COC0 Backscatter Quality, COC0 Backscatter Quality, COC0 CGS_OFFL_SIR_JOPM_2_00211231T01449_00211231T002665_C001 The OCG6 Allmeter Range, SSHA, SVM and Backscatter Quality Flage have tor one or more records. CS_OFFL_SIR_JOPM_2_00211231T02474_02011231T002164_C001 Ocean Allmeter Range, SSHA, SVM and Backscatter Quality Flage have tor one or more records. CS_OFFL_SIR_JOPM_2_00211231T002744_02011231T002164_C001 Ocean Allmeter Range, SSHA, SVM and Backscatter Quality and Backscatter Quality, COC0 Allmeter Range and Backscatter Quality, Flage have tor one or more records. CS_OFFL_SIR_JOPM_2_00211231T002744_0211231T002164_C001 Ocean Allmeter Range, SSHA, SVM and Backscatter Quality Allmeter Range and Backscatter Quality The Ocean Allmeter Range, SSHA, SVM and Backscatter Quality and the OCOC Allmeter Range and Backscatter Quality Range and Backscatter Quality CS_OFFL_SIR_JOPM_2_00211231T002544_C001	ve been set
CS_OFFL_SIR_JOPM_2_20211231T012709_20211231T01459_C001 and Backscatter Quality COCG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_JOPM_2_20211231T014158_20211231T014490_C001 QCCG Altimeter Range Quality, QCGG The QCGG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_JOPM_2_20211231T014158_20211231T014019_C001 QCCG Altimeter Range Quality, QCGG The QCGG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_JOPM_2_20211231T015140_20211231T020605_C001 QCcan Altimeter Range, SSHA, SWH and Backscatter Quality, CQCG The QCGG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_JOPM_2_20211231T020744_20211231T021216_C001 QCcan Altimeter Range, SSHA, SWH and Backscatter Quality, CQCG The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, CQCG CS_OFFL_SIR_JOPM_2_20211231T020744_20211231T025144_Q001 QCcan Altimeter Range, SSHA, SWH and Backscatter Quality, CQCG The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, CQCG CS_OFFL_SIR_JOPM_2_20211231T02544_Q0211231T025144_Q001 QCcan Altimeter Range, SSHA, SWH and Backscatter Quality, PGCG The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, PGCG CS_OFFL_SIR_JOPM_2_20211231T02549_Q001 QCcan Altimeter Range, SSHA, SWH and Backscatter Quality, PGCG The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality, PGCG CS_OFFL_SIR_JOPM_2_20211231T035049_Q0211231T035049_Q001 QCcan	
Component Construction Backscatter Quality for one or more records. CS_OFFL_SIR_IOPM_2_20211231T014453_20211231T014919_C001 OCCG Altimeter Range Quality, OCCG The OCCG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T015140_20211231T020805_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T020744_20211231T025140_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T024144_20211231T025144_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T024144_20211231T025144_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T025307_20211231T031648_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T033064_20211231T035648_C001 OCEGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T03648_20211231T03648_C001 OCEGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T03642_20211231T036642_C001 OCEGA Altimeter Range, SSHA, SWH and Backsc	
LB_DOPE_SIR_DOPM_2_202112311014493_20211231102605_0001 Backscatter Quality for one or more records. CS_OFFL_SIR_IOPM_2_20211231102605_0001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311020744_202112311021216_0001 Cean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311026144_00211231102514_0001 Cean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231102514_0001 Cean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311025307_202112311031648_0001 Coean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311031648_0001 Coean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311031648_0001 Coean Altimeter Range, SSHA, SWH and Backscatter Quality The OCean Altimeter Range and Backscatter Quality and Backscatter Quality CS_OFFL_SIR_IOPM_2_202112311031648_0001 Coean Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Altimeter Range and Backscatter Quality <	ve been set
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CS_OFFL_SIR_IOPM_2_20211231T020744_20211231T0216_C001 and backscatter Quality and the COCG Altimeter Range and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T024434_20211231T02544_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T025307_20211231T025307_20211231T025307_20211231T031648_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T025307_20211231T032648_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T031641_20211231T032634_C001 OCCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records. The OCCGO Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T033054_20211231T035436_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T042944_20211231T045542_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T045912_20211231T050622_C001 OCCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have for o	
CS_OFFL_SIR_JOPM_2_20211231T02434_20211231T025144_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality ocean Altimeter Range, SHA, SWH and Backscatter Quality, OCOG Altimeter Range, SHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SHA, SWH and backscatter Quality, OCOG Altimeter Range, SHA, SWH and backscatter Quality, OCOG Altimeter Range, SHA, SWH and backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags h set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T031041_20211231T032834_C001 OCCOG Altimeter Range, SHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SHA, SWH and Backscatter Quality, Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range, SHA, SWH and Backscatter Quality Flags h and the OCOG Altimeter Range and Backscatter Quality Flags h act for one or more records. CS_OFFL_SIR_IOPM_2_20211231T045912_20211231T050052_C001 OCCG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags h act for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050042_20211231T050624_C001 OCCG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags h and the OCOG Altimeter Range and Backscatter Quality Flags h and the OCOG Altimeter Range and Backscatter Quality for one or more r	
CS_OFFL_SIR_IOPM_2_20211231T025307_20211231T031648_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T031941_20211231T032834_C001 OCCOG Altimeter Range Quality, OCCOG Backscatter Quality The OCCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T033054_20211231T035436_C001 Occean Altimeter Range, SSHA, SWH and Backscatter Quality, OCCOG Altimeter Range and Backscatter Quality set for one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T045912_20211231T045924_C001 Occean Altimeter Range Quality, OCCOG Backscatter Quality The OCCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050052_C001 OCCG Altimeter Range Quality, OCCG Backscatter Quality The OCCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050059_20211231T050624_C001 OCCG Altimeter Range Quality, OCCG Altimeter Range and Backscatter Quality and the OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T05003	
CS_OFFL_SIR_IOPM_2_20211231T03304_20211231T035436_C001 Backscatter Quality for one or more records. CS_OFFL_SIR_IOPM_2_20211231T033054_20211231T035436_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T045912_20211231T050052_C001 OCCG Altimeter Range Quality, OCOG Backscatter Quality, OCOG The OCCG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050159_20211231T050624_C001 OCCG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags have for one or more records. The OCCG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T05109_20211231T050624_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags have for one or more records. The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Attimeter Range and Backscatter Quality Flags have for one or more records.	
CS_OFFL_SIR_IOPM_2_20211231T033054_20211231T035436_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T042944_20211231T045524_C001 Ocean Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050159_20211231T050624_C001 OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and t	ve been set
CS_OFFL_SIR_IOPM_2_20211231T042944_20211231T045524_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality and the OCOG Altimeter Range and Backscatter Quality Flags have set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T045912_20211231T050052_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T050159_20211231T050624_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231T051009_20211231T050624_C001 OCOG Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T051009_20211231T053446_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060651_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060334_20211231T060	
CS_OFFL_SIR_IOPM_2_202112311045912_202112311050052_C001 Backscatter Quality for one or more records. CS_OFFL_SIR_IOPM_2_202112311050159_202112311050624_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_20211231105009_202112311053446_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_202112311060334_202112311060620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_202112311060334_202112311060620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records. CS_OFFL_SIR_IOPM_2_202112311060651_202112311063345_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have for one or more records.	
CS_OFFL_SIR_IOPM_2_20211231T050159_20211231T050624_C001 Backscatter Quality for one or more records. CS_OFFL_SIR_IOPM_2_20211231T051009_20211231T053446_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on more records. CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on more records. CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T060334_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on more records. CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T063345_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on more records.	ve been set
CS_OFFL_SIR_IOPM_2_20211231T051009_20211231T053446_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has set for one or more records. CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T063345_C001 Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has set for one or more records.	ve been set
CS_OFFL_SIR_IOPM_2_20211231T060334_20211231T060620_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags has been on the ocogen and the OCOG Altimeter Range and Backscatter Quality Flags has been on the ocogen and the OCOG Altimeter Range, SSHA, SWH CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T063345_C001 Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags has been on the ocogen and the OCOG Altimeter Range and Backscatter Quality Flags has been on the ocogen and t	
CS_OFFL_SIR_IOPM_2_20211231T060651_20211231T063345_C001 and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_IOPM_2_20211231T064114_20211231T064704_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have for one or more records.	ve been set
CS_OFFL_SIR_IOPM_2_20211231T064943_20211231T070707_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee	
CS_OFFL_SIR_IOPM_2_20211231T072613_20211231T072705_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_IOPM_2_20211231T073942_20211231T081334_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been been	
CS_OFFL_SIR_IOPM_2_20211231T082021_20211231T082536_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality The OCOG Altimeter Range and Backscatter Quality Flags have for one or more records.	ve been set
CS_OFFL_SIR_IOPM_2_20211231T083003_20211231T083020_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Stringer Range and Backscatter Quality Flags have been been been been been been been be	
CS_OFFL_SIR_IOPM_2_20211231T084222_20211231T084403_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Set or more records.	
CS_OFFL_SIR_IOPM_2_20211231T090253_20211231T090532_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags has been been been been been been been bee	

CS_OFFL_SIR_IOPM_2_20211231T091904_20211231T092826_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T093112_20211231T095246_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T100030_20211231T100439_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_20211231T100920_20211231T101947_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T102135_20211231T102853_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T102948_20211231T103354_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T105637_20211231T105643_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_20211231T105922_20211231T105936_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_20211231T105939_20211231T110356_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T110535_20211231T113203_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T113354_20211231T113922_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_20211231T113942_20211231T114214_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_20211231T115026_20211231T120256_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T120324_20211231T122044_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T124258_20211231T125348_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T125551_20211231T131102_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T131322_20211231T131820_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_20211231T132728_20211231T133829_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T134423_20211231T135622_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T143516_20211231T145011_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T145244_20211231T145734_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_20211231T150426_20211231T152743_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T152745_20211231T152747_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_20211231T152752_20211231T153818_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T160539_20211231T162623_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T162711_20211231T162922_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.
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CS_OFFL_SIR_IOPM_2_20211231T163318_20211231T163650_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_20211231T164338_20211231T171127_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T174353_20211231T180828_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T181107_20211231T181605_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_20211231T181612_20211231T181940_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_20211231T182418_20211231T185743_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T191011_20211231T191213_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T195106_20211231T195637_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_20211231T200318_20211231T203634_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T204934_20211231T205058_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T210859_20211231T212535_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T213026_20211231T213534_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_20211231T214154_20211231T221541_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T224014_20211231T224453_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T224530_20211231T230309_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T231244_20211231T231439_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_20211231T232153_20211231T233515_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T233636_20211231T233901_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T234343_20211231T235109_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20211231T235111_20211231T235232_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_20211231T064704_20211231T064829_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_20211231T173840_20211231T173946_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_20211231T195637_20211231T195955_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_20211231T210657_20211231T210859_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_20211231T003910_20211231T004055_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_20211231T022254_20211231T022319_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPR_2_20211231T031648_20211231T031806_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_20211231T045524_20211231T045743_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_20211231T103354_20211231T104043_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_20211231T162701_20211231T162711_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (20Hz PLRM)

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20211231T000042_20211231T000317_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_20211231T000511_20211231T000734_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_20211231T001002_20211231T001137_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_20211231T004055_20211231T004259_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_20211231T012330_20211231T012436_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_20211231T013551_20211231T014158_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_20211231T023033_20211231T023112_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_20211231T023527_20211231T023735_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_20211231T024312_20211231T024434_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_20211231T025144_20211231T025307_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_20211231T035510_20211231T035816_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_20211231T041440_20211231T041926_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_20211231T042023_20211231T042144_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_20211231T050052_20211231T050158_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_20211231T064704_20211231T064829_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_20211231T072306_20211231T072428_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_20211231T072749_20211231T072846_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_20211231T073823_20211231T073941_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_20211231T082536_20211231T082648_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_20211231T084638_20211231T084643_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_20211231T095432_20211231T095855_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_20211231T100439_20211231T100559_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_20211231T104407_20211231T104817_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_20211231T114214_20211231T114402_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_20211231T123253_20211231T123342_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_20211231T134128_20211231T134423_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_20211231T140042_20211231T140338_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_20211231T140416_20211231T140627_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_20211231T145026_20211231T145244_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_20211231T145924_20211231T150348_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_20211231T154059_20211231T154451_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_20211231T160204_20211231T160505_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_20211231T163045_20211231T163317_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_20211231T180938_20211231T181106_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_20211231T185744_20211231T185902_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_20211231T192959_20211231T193333_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_20211231T194948_20211231T195106_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_20211231T195637_20211231T195955_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_20211231T212910_20211231T213025_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_20211231T004917_20211231T005436_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_20211231T011817_20211231T012030_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_20211231T020605_20211231T020744_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_20211231T021217_20211231T021453_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_20211231T022254_20211231T022319_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_0FFL_SIR_IOPR_2_20211231T022919_20211231T023033_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_20211231T023112_20211231T023154_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_20211231T023154_20211231T023527_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_20211231T024105_20211231T024218_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_20211231T031648_20211231T031806_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_20211231T040717_20211231T041440_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_20211231T054522_20211231T055513_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_20211231T071504_20211231T071641_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_20211231T072847_20211231T073635_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_20211231T073738_20211231T073810_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_20211231T083558_20211231T084220_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_20211231T090532_20211231T091904_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_20211231T104817_20211231T105553_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_20211231T105654_20211231T105718_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_20211231T114402_20211231T115025_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_20211231T120256_20211231T120324_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_20211231T122722_20211231T123252_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_20211231T123825_20211231T123953_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_20211231T132246_20211231T132541_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_20211231T135913_20211231T140041_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_20211231T140628_20211231T141318_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_20211231T142701_20211231T143516_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_20211231T150349_20211231T150425_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_20211231T155037_20211231T155203_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_20211231T172235_20211231T173023_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_20211231T190055_20211231T190824_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_20211231T190848_20211231T191011_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_20211231T192041_20211231T192220_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_20211231T193959_20211231T194254_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_20211231T195955_20211231T200318_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_20211231T203634_20211231T204629_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_20211231T205241_20211231T205525_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_20211231T212536_20211231T212910_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_20211231T213849_20211231T214154_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_20211231T221541_20211231T221642_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_20211231T230309_20211231T231008_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_20211231T235815_20211231T235939_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.			
L2 Quality Flags (1 Hz & 1Hz PLRM)					
Currently, there are several common flags raised in the Level 2 products, w	hich are summarised below.				
> 1Hz and 1Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected.					

1

T

Number of products with errors:

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20Hz)

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

197

56

144

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

Number of products with errors:

L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors:

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

6.1 P2P Product Format Check

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

Number of products with errors:

6.2 P2P Product Header Analysis

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

Number of products with errors:

6.3 P2P Auxiliary Data File Usage Check

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

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).

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

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

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

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

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

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

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220211230T231514_20211231T000451_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20211231T000451_20211231T005429_C001	Mean Sea Surface (1), Mean 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_220211231T005429_20211231T014406_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20211231T014406_20211231T023344_C001	Mean Sea Surface (1), Mean 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_220211231T023344_20211231T032321_C001	Mean Sea Surface (1), Mean 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_220211231T032321_20211231T041259_C001	Mean Sea Surface (1), Mean 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_220211231T041259_20211231T050236_C001	Mean Sea Surface (1), Mean 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_220211231T050236_20211231T055213_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20211231T055213_20211231T064150_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20211231T064150_20211231T073128_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20211231T073128_20211231T082105_C001	Mean Sea Surface (1), Mean 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_220211231T082105_20211231T091043_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20211231T091043_20211231T100020_C001	Mean Sea Surface (1), Mean 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_220211231T100020_20211231T104957_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_220211231T104957_20211231T113934_C001	Mean Sea Surface (1), Mean 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_220211231T113934_20211231T122912_C001	Mean Sea Surface (1), Mean 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_220211231T122912_20211231T131849_C001	Mean Sea Surface (1), Mean 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_220211231T131849_20211231T140827_C001	Mean Sea Surface (1), Mean 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_220211231T140827_20211231T145804_C001	Mean Sea Surface (1), Mean 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_220211231T145804_20211231T154741_C001	Mean Sea Surface (1), Mean 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_220211231T154741_20211231T163719_C001	Mean Sea Surface (1), Mean 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_220211231T163719_20211231T172656_C001	Mean Sea Surface (1), Mean 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_220211231T172656_20211231T181633_C001	Mean Sea Surface (1), Mean 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_220211231T181633_20211231T190611_C001	Mean Sea Surface (1), Mean 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_220211231T190611_20211231T195548_C001	Mean Sea Surface (1), Mean 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_220211231T195548_20211231T204526_C001	Mean Sea Surface (1), Mean 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_220211231T204526_20211231T213503_C001	Mean Sea Surface (1), Mean 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_220211231T213503_20211231T222440_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220211231T222440_20211231T231417_C001	Mean Sea Surface (1), Mean 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_220211231T231417_20220101T000355_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:
 0

P2P Quality Flags (20Hz)	P2P Quality Flags (20Hz)					
CryoSat P2P data includes Quality Flags for each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.						
Since the P2P Quality Flags are copied of	irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.					
Number of products with errors:	30					
P2P Quality Flags (20Hz PLRM)						
Since the P2P Quality Flags are copied of	irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.					
Number of products with errors:	29					
P2P Quality Flags (1 Hz & 1Hz P	LRM)					
Since the P2P Quality Flags are copied of	irectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.					
Number of products with errors:	30					
6.8 P2P Ocean Retracking Qu	ality Check					
6.8 P2P Ocean Retracking Qu P2P Retracking Flags (20Hz)	ality Check					
P2P Retracking Flags (20Hz)	ality Check ing quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.					
P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retract						
P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retract	ing quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.	_				
P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retract Ocean Retracking Quality Flag (PLRM):	ing quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set. his flag is currently set for products IOPR and IOPN products over sea ice, but this is to be expected.					
P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retract Ocean Retracking Quality Flag (PLRM): 1 Number of products with errors: P2P Retracking Flags PLRM	ing quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set. his flag is currently set for products IOPR and IOPN products over sea ice, but this is to be expected.					
P2P Retracking Flags (20Hz) Cryosat P2P data includes an ocean retract Ocean Retracking Quality Flag (PLRM): Number of products with errors: P2P Retracking Flags PLRM CryoSat L2 data includes an ocean retracking	ing quality flag (field 19) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set. his flag is currently set for products IOPR and IOPN products over sea ice, but this is to be expected. 27					

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	223	223	3	220	0
SIR_IOPR1B	133	107	2	105	0
SIR_IOPN1B	107	133	0	133	0
SIR_IOPM_2	223	223	164	59	0
SIR_IOPR_2	133	107	44	63	0
SIR_IOPN_2	107	133	40	79	14
SIR_IOP_P2P	29	29	0	20	9

7.1 QCC Errors

Number of QCC reports with errors:

	Total number of occurrences of each error										
Product Type	RLOBOPNCDF	RL	RL	RLOBOPNCDF	RL	RL	-	-	-	-	-
SIR_IOPR_2	14	2	14	14	2	14					
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR IOP 2	9	9	9	9							

31

2238

Test Description Key:	sst Description Key:					
Abbreviation	Test name	Details				
RLOBOPNCDF	RangeLatitudeOrBlankOP_7NetCDF	Latitude should be between -90E7 and 90E7				
RL	RangeLatitude_6	Latitude should be between -90E6 and 90E6				
RL	RangeLatitude_7	Latitude should be between -90E7 and 90E7				
RLOBOPNCDF	RangeLongitudeOrBlankOP_7NetCDF	Longitude should be between -180E7 and 180E7				
RL	RangeLongitude_6	Longitude should be between -180E6 and 180E6				
RL	RangeLongitude_7	Longitude should be between -180E7 and 180E7				

7.2 QCC Warnings

Number of QCC reports with warnings

Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC
SIR IOPM1B	220	0	0	0	0	0	0
SIR IOPM 2	0	0	40	46	0	43	0
SIR IOPN1B	103	0	0	0	0	0	0
SIR_IOPN_2	0	0	8	31	3	20	22
SIR_IOPR1B	129	0	0	0	0	0	0
SIR_IOPR_2	0	14	32	47	0	32	22
						÷	
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARN	CERPEPOPFDPLRMSINNC	DIRPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	34	0	37	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	11	0	0	0	21	0	33
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	9	1	0	48	0	56	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	6	24	0	3
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	27	15	36	52	33
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	44	0	3	59	39	12
	·						
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	33	0	3	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	46	2
	00	0.4	12	0	0	0	0
SIR_IOPN_2	26	31	12	0	0	0	14

L	SIR_IOPR_2	32	49	1	1	16	0	0
	Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
	SIR_IOP_2_	19	29	29	3	29	16	28
	Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
	SIR_IOP_2_	1	13	29	21	17	29	16
	Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
	SIR_IOP_2_	27	27	18	14	29		

Test Description Key:		
Abbreviation	Test name	Details
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RBSZOPOEPFDPLRM	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 signa zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD	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	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)
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

7.3 Missing QCC Reports

Number of products with missing QCC reports: 0