

# **QA4EO Daily Report for IOP data:**

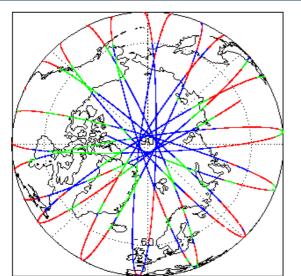
<u>01/06/2023</u>

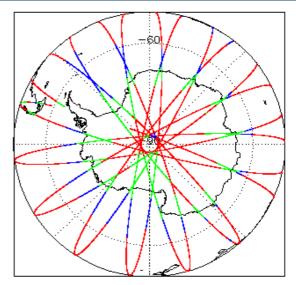
# IDEAS-QA4E0

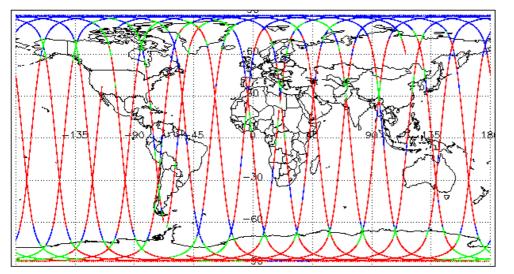
1. Overview					
Report Production:	05-Jun-2023	Check	L1 & L2	P2P	
		Server check: science-pds.cryosat.esa.int	Nominal	Nominal	
Processor Used:		Server check: calval-pds.cryosat.esa.int	Nominal	Nominal	
Processor Usea:	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal	
	Intermediate Ocean 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	
We would	love to hear from you!	Auxiliary Correction Error Check	See Section 5.4	See Section 6.4	
	your feedback about these daily	Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5	
quality reports: What do you like/ dislike? What quality		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6	
information do you need? Send your feedback to		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7	
cs2_qc_team@telespazio.com		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1, 7.2	

	Mission / Instrument News				
	31-May-2023	None			
01-Jun-2023		None			
02-Jun-2023		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 NetCDF product file (.nc).

For all products, a series of pre-defined checks are performed on the MPH ar	nd SPH in order to identify any incons	sistencies and/or errors raised by the ground-segment processing chain.
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 to cl	heck 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 indicates	any problems when set.
CryoSat L1B data includes a correction error flag for each measurement reco Number of products with errors: 0	rd. The bit value of this flag indicates	any problems when set.
Number of products with errors: 0	rd. The bit value of this flag indicates	any problems when set.
Number of products with errors: 0	rd. The bit value of this flag indicates	any problems when set.
Jumber of products with errors:       0         4.5 L1B Measurement Confidence Data Check		
Number of products with errors:         0           4.5 L1B Measurement Confidence Data Check           CryoSat L1B data includes a measurement confidence flag for each measure           > Attitude Correction Missing: This flag is currently set in error for IOPR private in the set of t	ment record. The bit value of this flag	
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 bit value of this flag	g indicates any problems when set.
Number of products with errors:         0           4.5 L1B Measurement Confidence Data Check           CryoSat L1B data includes a measurement confidence flag for each measure           • Attitude Correction Missing: This flag is currently set in error for IOPR propate.	ment record. The bit value of this flag	g indicates any problems when set. The attitude correction is actually not missing. This will be resolved in the next SW Description
Aumber of products with errors: 0 4.5 L1B Measurement Confidence Data Check CryoSat L1B data includes a measurement confidence flag for each measure Attitude Correction Missing: This flag is currently set in error for IOPR pro- products with errors: 3	ment record. The bit value of this flag oducts due to a configuration issue. 1	g indicates any problems when set. The attitude correction is actually not missing. This will be resolved in the next SW
Aumber of products with errors:       0         4.5 L1B Measurement Confidence Data Check         CryoSat L1B data includes a measurement confidence flag for each measure         Attitude Correction Missing: This flag is currently set in error for IOPR propotate.         Aumber of products with errors:       3         Product	ment record. The bit value of this flag oducts due to a configuration issue. T	g indicates any problems when set. The attitude correction is actually not missing. This will be resolved in the next SV Description There is an error in the scaling of the L1B waveform for one or more

#### 4.6 L1B Waveform Group Data Check

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

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

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20230601T034126_20230601T040930_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T000957_20230601T001105_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T001205_20230601T001316_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T004542_20230601T004725_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T014913_20230601T015506_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T032328_20230601T032507_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T082048_20230601T082303_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T105528_20230601T105725_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T141415_20230601T141657_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T183334_20230601T183513_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T214036_20230601T214411_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T214459_20230601T214539_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230601T232429_20230601T232556_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T032507_20230601T032913_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T045827_20230601T050023_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T050749_20230601T051128_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T082303_20230601T083001_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T100209_20230601T100924_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T113138_20230601T113408_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T114309_20230601T114647_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T132104_20230601T132616_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T195304_20230601T200021_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T204018_20230601T204332_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230601T213438_20230601T213918_C001	Loss of Echo	The tracking echo is missing for one or more records

# 5. IOP Level 2 Data Quality Check

## 5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a NetCDF product file (.nc). Number of products with errors: 0

## 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain. Number of products with errors: 0

## 5.3 L2 Auxiliary Data File Usage Check

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

# Number of products with errors:

## 5.4 L2 Auxiliary Correction Error Check

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

0

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

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

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

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

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> 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_20230601T001939_20230601T003217_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T000255_20230601T000416_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T000416_20230601T000431_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T000957_20230601T001105_C001	Mean Sea Surface (1), Mean 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_20230601T004542_20230601T004725_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOPN_2_20230601T005255_20230601T005508_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T014913_20230601T015506_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T024158_20230601T024425_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T032328_20230601T032507_C001	Mean Sea Surface (1), Mean 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_20230601T032913_20230601T032916_C001	Mean Sea Surface (1), Mean 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_20230601T041133_20230601T041312_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T050720_20230601T050749_C001	Mean Sea Surface (1), Mean 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_20230601T051128_20230601T051529_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T055141_20230601T055510_C001	Mean Sea Surface (1), Mean 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_20230601T073051_20230601T073412_C001	Mean Sea Surface (1), Mean 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_20230601T082048_20230601T082303_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_20230601T091827_20230601T091936_C001	Mean Sea Surface (1), Mean 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_20230601T100102_20230601T100209_C001	Mean Sea Surface (1), Mean 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_20230601T105528_20230601T105725_C001	Mean Sea Surface (1), Mean 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_20230601T113908_20230601T114124_C001	Mean Sea Surface (1), Mean 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_20230601T132041_20230601T132104_C001	Mean Sea Surface (1), Mean 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_20230601T140441_20230601T140743_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T145908_20230601T145921_C001	Mean Sea Surface (1), Mean 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_20230601T163030_20230601T163519_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T164236_20230601T164410_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T181053_20230601T181217_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T190344_20230601T190510_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230601T191026_20230601T191331_C001	Mean Sea Surface (1), Mean 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_20230601T204332_20230601T204641_C001	Mean Sea Surface (1), Mean 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_20230601T222406_20230601T222641_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Topography height (solution 1)         CS_OFFL_SIR_IOPN_2_20230601T231227_20230601T231404_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography height (solution 1), the Mean Dynamic for one or more records         CS_OFFL_SIR_IOPN_2_20230601T231917_20230601T232036_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 Total Geocentric Ocean Topography (solution 1), the Total Geocentric Ocean There is an error with the Mean Dynamic Topography (a)         CS_OFFL_SIR_IOPN_2_20230601T232429_20230601T232556_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOPR_2_20230601T000431_20230601T000957_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the for one or more records         CS_OFFL_SIR_IOPR_2_20230601T001316_20230601T001749_C001       Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide       There is an error with the Total Geocentric Ocean Tide (FES), Non- for one or more records	ne Mean Dynamic
CS_OFFL_SIR_IOPN_2_20230601T231917_20230601T232036_C001       Mean Dynamic Topography (1)       for one or more records         CS_OFFL_SIR_IOPN_2_20230601T231917_20230601T232036_C001       Mean Sea Surface (1), Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (GOT)         CS_OFFL_SIR_IOPN_2_20230601T232429_20230601T232556_C001       Mean Dynamic Topography (1)       There is an error with the Mass height (solution 1), the Mass Dynamic Topography (1)         CS_OFFL_SIR_IOPN_2_20230601T000431_20230601T000957_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Topography (1)         CS_OFFL_SIR_IOPR_2_20230601T000431_20230601T000957_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)       There is an error with the Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period Ocean Tide (FES), Non-GOT and 2: FES)	
CS_OFFL_SIR_IOPN_2_20230601T231917_20230601T232036_C001       Topography (1), Total Geocentric Ocean Tide (GOT)         CS_OFFL_SIR_IOPN_2_20230601T232429_20230601T232556_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography (and the Maximum Comportance)         CS_OFFL_SIR_IOPN_2_20230601T2032429_20230601T232556_C001       Mean Dynamic Topography (1)       There is an error with the Mean Dynamic Topography (and the Maximum Comportance)         CS_OFFL_SIR_IOPR_2_20230601T000431_20230601T000957_C001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Topography (1)         CS_OFFL_SIR_IOPR_2_20230601T001316_20230601T001749_C001       Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period Ocean Tide (FES), Non-GOT and 2: FES)	eight (solution 1)
CS_OFFL_SIR_IOPR_2_202306017020431_202306017000957_C001       Integrating Topography (1)       for one or more records         CS_OFFL_SIR_IOPR_2_202306017000431_202306017000957_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Topography (1)         CS_OFFL_SIR_IOPR_2_202306017001316_202306017001749_C001       Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period of the topography (1)	
CS_OFFL_SIR_IOPR_2_202306011000431_202306011000957_C001       Topography (1)       Topography height (solution 1)         CS_OFFL_SIR_IOPR_2_202306011001316_202306011001749_C001       Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period 0	eight (solution 1)
CS_OFFL_SIR_IOPR_2_20230601T001316_20230601T001749_C001 Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T014232_20230601T014913_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T032507_20230601T032913_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T032916_20230601T032928_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T045827_20230601T050023_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography here is an	eight (solution 1)
CS_OFFL_SIR_IOPR_2_20230601T050344_20230601T050720_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T050749_20230601T051128_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T064156_20230601T065021_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T081140_20230601T081456_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography here is an	eight (solution 1)
CS_OFFL_SIR_IOPR_2_20230601T082303_20230601T083001_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T100209_20230601T100924_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T111653_20230601T111907_C001 Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tice (GOT) Topography (solution 1), the Total Geocentric Ocean Tice (GOT) for one or more records	
CS_OFFL_SIR_IOPR_2_20230601T114124_20230601T114309_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T114309_20230601T114647_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T132002_20230601T132041_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T132104_20230601T132616_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T145826_20230601T145908_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T145921_20230601T150354_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T150354_20230601T150725_C001 Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) There is an error with the Mean Dynamic Topography (s Total Geocentric Ocean Tide (solution 1: GOT) for one of the topography (s to the top graphy (s to the top gr	
CS_OFFL_SIR_IOPR_2_20230601T163519_20230601T164236_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T181448_20230601T182121_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T182121_20230601T182148_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T195049_20230601T195226_C001 Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-GOT and 2: FES) and the Non-equilibrium Long Period (Equilibrium Long Period Ocean Tide for one or more records	
CS_OFFL_SIR_IOPR_2_20230601T195304_20230601T200021_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T200021_20230601T200222_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T213438_20230601T213918_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T213918_20230601T214036_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic
CS_OFFL_SIR_IOPR_2_20230601T231404_20230601T231758_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography height (solution 1) and the topograph	ne Mean Dynamic

# 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230601T001749_20230601T001903_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM_2_20230601T045616_20230601T045827_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM_2_20230601T165606_20230601T171446_C001		There is an error in the scaling of the L1B waveform for one or more records

## 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20 Hz)

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

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230601T001939_20230601T003217_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_20230601T003800_20230601T004542_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_20230601T004725_20230601T005120_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_20230601T005508_20230601T010314_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_20230601T010548_20230601T012052_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_20230601T013708_20230601T014232_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_20230601T015727_20230601T023043_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_20230601T023629_20230601T024158_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_20230601T024528_20230601T030947_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_20230601T034126_20230601T040930_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_20230601T041600_20230601T042048_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_20230601T042055_20230601T042200_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_20230601T042352_20230601T045136_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_20230601T051529_20230601T054825_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_20230601T055510_20230601T060040_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_20230601T060300_20230601T060829_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_20230601T063931_20230601T064156_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_20230601T065419_20230601T072807_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_20230601T073518_20230601T073927_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_20230601T074223_20230601T080108_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_20230601T083252_20230601T090625_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_20230601T091432_20230601T091827_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_20230601T092240_20230601T095647_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_20230601T095813_20230601T100102_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_20230601T101316_20230601T102928_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_20230601T102931_20230601T103155_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_20230601T103310_20230601T104559_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_20230601T104756_20230601T105313_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_20230601T105320_20230601T105326_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_20230601T110343_20230601T111653_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_20230601T111907_20230601T113138_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_20230601T115831_20230601T120855_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_20230601T121035_20230601T122447_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_20230601T122722_20230601T123225_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_20230601T123249_20230601T123404_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_20230601T124058_20230601T124156_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_20230601T124815_20230601T125310_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_20230601T130409_20230601T131119_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_20230601T134257_20230601T140327_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_20230601T140743_20230601T141143_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_20230601T141204_20230601T141415_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_20230601T141821_20230601T144139_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_20230601T151837_20230601T154337_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_20230601T154532_20230601T155058_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	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_20230601T155104_20230601T155430_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_20230601T155800_20230601T163030_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_20230601T165606_20230601T171446_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_20230601T171724_20230601T172303_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_20230601T172534_20230601T173337_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_20230601T173714_20230601T181053_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_20230601T182421_20230601T182514_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_20230601T182537_20230601T182612_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_20230601T183910_20230601T184101_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_20230601T184236_20230601T184441_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_20230601T185351_20230601T190206_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_20230601T190510_20230601T191026_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_20230601T191702_20230601T195049_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_20230601T200222_20230601T200702_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_20230601T201426_20230601T201923_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_20230601T202134_20230601T202732_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_20230601T202920_20230601T204018_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_20230601T204641_20230601T204927_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_20230601T205627_20230601T212246_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_20230601T212425_20230601T212612_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_20230601T212628_20230601T212928_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_20230601T214539_20230601T215231_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_20230601T215247_20230601T221705_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_20230601T222641_20230601T222835_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_20230601T223051_20230601T223332_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_20230601T223536_20230601T223935_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_20230601T224026_20230601T225137_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_20230601T225139_20230601T230228_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_20230601T230628_20230601T231227_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_20230601T232556_20230601T234142_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_20230601T234801_20230601T235904_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_20230601T013445_20230601T013505_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_20230601T063513_20230601T063818_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_20230601T080927_20230601T080955_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_20230601T125803_20230601T125803_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_20230601T150825_20230601T150948_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_20230601T155550_20230601T155800_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

# L2 Quality Flags (20 Hz PLRM)

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20230601T000255_20230601T000416_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_20230601T003651_20230601T003800_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_20230601T005255_20230601T005508_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_20230601T010314_20230601T010503_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_20230601T014913_20230601T015506_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_20230601T023203_20230601T023351_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_20230601T024158_20230601T024425_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_20230601T032328_20230601T032507_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_20230601T042200_20230601T042323_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_20230601T050720_20230601T050749_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_20230601T055141_20230601T055510_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_20230601T062013_20230601T062115_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_20230601T063326_20230601T063346_C001         CCCG Altimeter Range Ouality PLRM. CCCG Backscatter Ouality PLRM. CCCG Backscatt	I for one or lity Flags lave been I for one or I for one or lity Flags lave been lity Flags lave been lity Flags lave been content lity Flags lave been lity Flags lave been or or one or lity Flags lave been lity Flags lave been or one or
US_OFFL_SIR_IOPN_2_20230601T073051_20230601T073412_C001         OCOG Backscater Cually         more records           OS_OFFL_SIR_IOPN_2_20230601T073051_20230601T073412_C001         Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM         The Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM         The Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM           OS_OFFL_SIR_IOPN_2_20230601T073027_20230601T074051_C001         Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM         The Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM         The Ocean Altmeter Range, SSHA, SWH and Backscatter Cually PLIM           CS_OFFL_SIR_IOPN_2_20230601T070000_20230601T080436_C001         OCOG Altmeter Range Quality PLIM, OCOG Backscatter Cually         The OCOG Range and Backscatter Cually Flags have been set more records           CS_OFFL_SIR_IOPN_2_20230601T090800_20230601T090951_C001         OCOG Altmeter Range, SSHA, SWH and Backscatter Cually         The OCOG Range and Backscatter Cually Flags have been set more records           CS_OFFL_SIR_IOPN_2_20230601T091827_20230601T091936_C001         OCOG Altmeter Range, SSHA, SWH and Backscatter Cually         The OCOG Range and Backscatter Cually Flags have been set more records           CS_OFFL_SIR_IOPN_2_20230601T105725_C001         OCOG Altmeter Range, SSHA, SWH and Backscatter Cually Flags h at tor ore or more records         The OCOG Range and Backscatter Cually Flags h at tor ore or more records           CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001         OCCG Altmeter Range, SSHA, SWH and Backscatter Cually Flags h at tor ore or more records	lity Flags lave been t for one or t for one or lity Flags lave been lity Flags lave been lity Flags lave been lity Flags lave been consoletting lity Flags lave been lity Flags lave been consoletting lity Flags lave been lity Flags lave been consoletting lity Flags lave been lity Flags lave been lity Flags
CS_OFFL_SIR_JOPN_2_20230601T073051_20230601T073412_C001       and Backscatter Quality PLEM. OCCI       Ind Order Analyses FARs. SWH and Backscatter Quality Fags h as the row or more records         CS_OFFL_SIR_JOPN_2_20230601T073052_20230601T074051_C001       Attender Range. SSHA, SWH and Backscatter Quality FLEM. OCCI       The OCcion Altenter Range, SSHA, SWH and Backscatter Quality FLEM. OCCI         CS_OFFL_SIR_JOPN_2_20230601T078052_20230601T074051_C001       OCCIG Altenter Range. SSHA, SWH and Backscatter Quality FLEM. OCCI       The OCCIA Rameter Range And Backscatter Quality FLEM. OCCI         CS_OFFL_SIR_JOPN_2_20230601T080108_20230601T080436_C001       OCCIG Altimeter Range. SSHA, SWH and Backscatter Quality FLEM. OCCIG Backscatter Quality       The OCCIG Range and Backscatter Quality FLEM. OCCIG Altimeter Range. SSHA, SWH and Backscatter Quality FLEM. OCCIG Backscatter Quality         CS_OFFL_SIR_JOPN_2_20230601T09800_20230601T090951_C001       OCCIG Backscatter Quality       The OCCIG Altimeter Range. SSHA, SWH and Backscatter Quality         CS_OFFL_SIR_JOPN_2_20230601T091827_20230601T091936_C001       OCCIG Backscatter Quality       The OCCIG Altimeter Range and Backscatter Quality FLEM. OCCIG Altimeter Range and Backscatter Quality FLEM. OCCIG Altimeter Range and Backscatter Quality FLEM.         CS_OFFL_SIR_JOPN_2_20230601T105252_C001       Cecan Altimeter Range Altimeter Range and Backscatter Quality FLEM. OCCIG Altimeter Range and Backscatter Quality FLEM.         CS_OFFL_SIR_JOPN_2_20230601T114242_C001       OCCIG Altimeter Range Altimeter Range and Backscatter Quality FLEM.       The OCCIG Altimeter Range and Backscatter Quality FLEM.	lity Flags lave been lity Flags lave been lity Flags lave been lity Flags lave been lity Flags lave been lity Flags lave been lity Flags lave been
CS_OFFL_SIR_IOPN_2_20230601T073927_20230601T074051_C001       and Backsaater Quality PLM, QOOG       Intel De Coog Alimeter Parage, SSHA, SWH and Backsaater Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T074051_C001       OCOG Alimeter Range Quality PLM, QOOG       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T090800_20230601T090951_C001       OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set more records       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T091827_20230601T091936_C001       OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set more records       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T1091827_20230601T1091936_C001       OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set more records       The Ocean Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T105752_C001       Afimeter Range Cuality PLM, OCOG Alimeter Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T11424_C001       OCOG Alimeter Range Quality PLM, OCOG Alimeter Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       OCOG Alime	t for one or t for one or t for one or lity Flags have been t for one or lity Flags tave been lity Flags tave been lity Flags tave been
CS_OFFL_SIR_IOPN_2_202306011108018_2023060111080436_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_IOPN_2_20230601T090800_20230601T090951_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set ocean Altimeter Range and Backscatter Quality Flags have been set or no or more records         CS_OFFL_SIR_IOPN_2_20230601T114908_20230601T114124_C001       OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       OCCOG Altimeter Range and Backscatter Quality PLRM       The Ocean Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20	I for one or lity Flags nave been lity Flags nave been I for one or lity Flags nave been lity Flags nave been
CS_OFFL_SIR_IOPN_2_20230601T091827_20230601T091936_C001       OCCG Backscatter Quality       more records         OS_OFFL_SIR_IOPN_2_20230601T091827_20230601T091936_C001       Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range and Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCCG Attimeter Range and Backscatter Quality FLRM, OCCG Backscatter Quality PLRM, DCCG Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCCG Backscatter Quality PLRM, OCCG Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM       The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCCG Attimeter Range and Backscatter Quality FLRM, OCCG Attimeter Range and Backscatter Quality FLRM, OCCG	lity Flags lave been lity Flags lave been t for one or lity Flags have been lity Flags have been
CS_OFFL_SIR_IOPN_2_20230601T091827_20230601T091936_C001       and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T105528_20230601T105725_C001       and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T115528_20230601T1114124_C001       OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       OCOG Attimeter Range, SSHA, SWH and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T114824_C001       OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T115831_C001       OcoG Attimeter Range Quality PLRM, OCOG Attimeter Range and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T1124159_20230601T1124305_C001       OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags h set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T1124305_C001       OCOG Attimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags h s	lity Flags lave been t for one or lity Flags lave been lity Flags lave been lity Flags lave been
CS_OFFL_SIR_IOPN_2_20230601T105528_20230601T105725_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM,       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T113908_20230601T114124_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       Ocoan Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set more records       The OCean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have bet for one or more records         CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T115831_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCean Altimeter Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T115831_C001       Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T124305_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter	t for one or lity Flags lave been lity Flags lave been lity Flags
CS_OFFL_SIR_IOPN_2_20230601T113908_20230601T114124_C001       OCOG Backscatter Quality       more records         CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T115831_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Files and Backscatter Quality Files and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T115831_C001       Ocean Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPN_2_20230601T124159_20230601T124305_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T124305_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T124530_20230601T124815_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records	lity Flags nave been lity Flags nave been t for one or
CS_OFFL_SIR_IOPN_2_20230601T114647_20230601T114824_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       In B Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags In and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCean Altimeter Range, SSHA, SWH and Backscatter Quality Flags In and the OCOG Altimeter Range and Backscatter Quality Flags In set for one or more records         CS_OFFL_SIR_IOPN_2_20230601T124159_20230601T124305_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags In ave been set more records         CS_OFFL_SIR_IOPN_2_20230601T124815_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records	have been lity Flags have been t for one or
CS_OFFL_SIR_IOPN_2_20230601T115518_20230601T115831_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       In B Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set and the OCOG Altimeter Range and Backscatter Quality         CS_OFFL_SIR_IOPN_2_20230601T124159_20230601T124305_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T124530_20230601T124815_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records         CS_OFFL_SIR_IOPN_2_20230601T124530_20230601T124815_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set more records	t for one or
CS_OFFL_SIR_IOPN_2_20230601T124530_20230601T124815_C001 OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, DCOG Range and Backscatter Quality Flags have been set	
OCOG Altimeter Range Quality PI RM The OCOG Range and Rackscatter Quality Flags have been set	(
OCOC Altimator Dange Quality DI DM	tor one or
CS_OFFL_SIR_IOPN_2_20230601T130247_20230601T130409_C001 OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Plags have been set OCOG Rackscatter Quality PLRM, The OCOG R	for one or
CS_OFFL_SIR_IOPN_2_20230601T131449_20230601T132002_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality Flags have been set more records	for one or
CS_OFFL_SIR_IOPN_2_20230601T132041_20230601T132104_C001 CS_OFFL_SIR_IOPN_2_20230601T132041_20230601T1320401_2023000000000000000000000000000000000	
CS_OFFL_SIR_IOPN_2_20230601T141415_20230601T141657_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags h set for one or more records	
CS_OFFL_SIR_IOPN_2_20230601T144639_20230601T144730_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Flags have been set more records	for one or
CS_OFFL_SIR_IOPN_2_20230601T145242_20230601T145404_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality Flags have been set more records	for one or
CS_OFFL_SIR_IOPN_2_20230601T145452_20230601T145826_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Flags have been set more records	for one or
CS_OFFL_SIR_IOPN_2_20230601T151427_20230601T151620_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality Flags have been set more records	for one or
CS_OFFL_SIR_IOPN_2_20230601T155430_20230601T155550_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags h set for one or more records	
CS_OFFL_SIR_IOPN_2_20230601T163030_20230601T163519_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter QUALITA PLRM, OCOG Backscatter QUALITA PLRM, OCOG Backscatter QUALITA PLRM, OC	for one or
CS_OFFL_SIR_IOPN_2_20230601T164236_20230601T164410_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 h set for one or more records	
CS_OFFL_SIR_IOPN_2_20230601T172410_20230601T172534_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CS_OFFL_SIR_IOPN_2_20230601T173337_20230601T173449_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality COG Backscatter QUA	for one or

CS_OFFL_SIR_IOPN_2_20230601T181314_20230601T181448_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_20230601T182148_20230601T182334_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_20230601T182655_20230601T182818_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_20230601T184101_20230601T184236_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_20230601T184441_20230601T184550_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_20230601T191026_20230601T191331_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_20230601T201923_20230601T202134_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_20230601T204929_20230601T205311_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_20230601T213420_20230601T213438_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_20230601T214036_20230601T214411_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_20230601T222238_20230601T222403_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_20230601T222406_20230601T222641_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_20230601T222835_20230601T223051_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_20230601T231227_20230601T231404_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_20230601T234655_20230601T234801_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_20230601T000431_20230601T000957_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_20230601T001316_20230601T001749_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_20230601T003217_20230601T003359_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_20230601T003414_20230601T003651_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_20230601T012807_20230601T012852_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_20230601T014232_20230601T014913_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_20230601T032507_20230601T032913_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_20230601T040930_20230601T041133_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_20230601T050344_20230601T050720_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_20230601T050749_20230601T051128_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_20230601T054825_20230601T055141_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_20230601T063513_20230601T063818_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_20230601T064156_20230601T065021_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_20230601T081919_20230601T082048_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_20230601T082303_20230601T083001_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_20230601T083013_20230601T083049_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_20230601T100209_20230601T100924_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_20230601T101140_20230601T101316_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_20230601T105725_20230601T105849_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_20230601T105857_20230601T110343_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_20230601T111653_20230601T111907_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_20230601T113138_20230601T113408_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_20230601T113536_20230601T113908_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_20230601T114124_20230601T114309_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_20230601T114309_20230601T114647_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_20230601T120855_20230601T121035_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_20230601T124305_20230601T124343_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_20230601T125455_20230601T125748_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_20230601T131242_20230601T131449_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_20230601T132104_20230601T132616_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_20230601T145921_20230601T150354_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_20230601T150354_20230601T150725_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_20230601T150825_20230601T150948_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_20230601T155550_20230601T155800_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_20230601T163519_20230601T164236_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_20230601T164605_20230601T164742_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_20230601T165256_20230601T165339_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_20230601T172303_20230601T172410_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_20230601T173449_20230601T173714_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_20230601T181217_20230601T181314_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_20230601T181448_20230601T182121_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_20230601T185022_20230601T185321_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_20230601T190206_20230601T190344_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_20230601T191331_20230601T191702_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_20230601T195304_20230601T200021_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_20230601T200021_20230601T200222_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_20230601T205311_20230601T205335_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_20230601T213438_20230601T213918_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_20230601T213918_20230601T214036_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_20230601T221705_20230601T222238_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_20230601T231404_20230601T231758_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_20230601T231758_20230601T231914_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_20230601T234142_20230601T234417_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records		
L2 Quality Flags (1 Hz & 1 Hz PLRM)	·	-		
Currently, there are several common flags raised in the Level 2 products, v	which are summarised below.			
> 1 Hz and 1 Hz Ocean SSHA Quality Flags: These flags are currently set for	products over sea ice, which is to be expecte	ed. The number of products with this error flag set is given below.		
Number of products with errors: 204				
5.8 L2 Ocean Retracking Quality Check				
L2 Retracking Flags (20 Hz)				
CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz measu	rement record. The bit value of this flag indica	ates any problems when set.		
> Ocean Retracking Quality Flag: This flag is currently set for products over la				
Number of products with errors: 62				
L2 Retracking Flags (20 Hz PLRM)				
CryoSat L2 data includes an ocean retracking quality flag for each 20 Hz PLRM	measurement record. The bit value of this fla	g indicates any problems when set.		
> Ocean Retracking Quality Flag (PLRM): This flag is currently set for products IOPR and IOPN products over sea ice, but this is to be expected. The number of products with this error flag set is given below.				
Number of products with errors: 164				
6.00.12	Pole-to-Pole Data Quality	Check		
6. IOP L2	Tole-to-Pole Data Quality			

# 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).

0

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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: 0

#### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

## 6.4 P2P Auxiliary Correction Error Check

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

0

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

> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric 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.

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> 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_2_20230531T231828_20230601T000807_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_20230601T000807_20230601T005743_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20230601T005743_20230601T014722_C001	Mean Sea Surface (1), Mean 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_20230601T014722_20230601T023658_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_2_20230601T023658_20230601T032636_C001	Mean Sea Surface (1), Mean 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_20230601T032636_20230601T041613_C001	Mean Sea Surface (1), Mean 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_20230601T041613_20230601T050551_C001	Mean Sea Surface (1), Mean 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_20230601T050551_20230601T055527_C001	Mean Sea Surface (1), Mean 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_20230601T055527_20230601T064506_C001	Mean Sea Surface (1), Mean 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_220230601T064506_20230601T073442_C001	Mean Sea Surface (1), Mean 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_20230601T073442_20230601T082420_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_2_20230601T082420_20230601T091357_C001	Mean Sea Surface (1), Mean 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_20230601T091357_20230601T100335_C001	Mean Sea Surface (1), Mean 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_20230601T100335_20230601T105311_C001	Mean Sea Surface (1), Mean 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_20230601T105311_20230601T114250_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_2_20230601T114250_20230601T123226_C001	Mean Sea Surface (1), Mean 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_20230601T123226_20230601T132204_C001	Mean Sea Surface (1), Mean 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_20230601T132204_20230601T141141_C001	Mean Sea Surface (1), Mean 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_20230601T141141_20230601T150119_C001	Mean Sea Surface (1), Mean 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_20230601T150119_20230601T155055_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_2_20230601T155055_20230601T164034_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_2_20230601T164034_20230601T173010_C001	Mean Sea Surface (1), Mean 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_20230601T173010_20230601T181948_C001	Mean Sea Surface (1), Mean 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_20230601T181948_20230601T190925_C001	Mean Sea Surface (1), Mean 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_20230601T190925_20230601T195903_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records

CS_OFFL_SIR_IOP_2_20230601T195903_20230601T204839_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS OFFE SIR IOP 2 202306011204839 202306011213818 C001	Mean Sea Surface (1), Mean 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_20230601T213818_20230601T222754_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS OFFE SIR IOP 2 202306011222754 202306011231732 CO01	Mean Sea Surface (1), Mean 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_20230601T231732_20230602T000708_C002	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records

#### 6.5 P2P Measurement Confidence Data Check

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

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Product	Test Failed	Description
CS_OFFL_SIR_IOP_220230601T000807_20230601T005743_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_2_20230601T041613_20230601T050551_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_220230601T164034_20230601T173010_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

#### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20 Hz)

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

Since the P2P Quality Flags are copied directly for below.	rom the L2 Quality Flags, please see Section 5.6 for the full list of products affected. The number of P2P products affected is given
Number of products with errors:	29

#### P2P Quality Flags (20 Hz PLRM)

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

# Number of products with errors: 30

# P2P Quality Flags (1 Hz & 1 Hz PLRM)

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

Number of products with errors:

## 6.8 P2P Ocean Retracking Quality Check

#### P2P Retracking Flags (20 Hz)

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

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

#### Number of products with errors:

#### P2P Retracking Flags PLRM

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

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

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#### Number of products with errors:

## 7. IOP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	153	153	5	148	0
SIR_IOPR1B	129	113	1	112	0
SIR_IOPN1B	113	129	0	129	0
SIR_IOPM_2	153	153	101	52	0
SIR_IOPR_2	129	113	44	68	1
SIR_IOPN_2	113	129	49	80	0
SIR_IOP_P2P	29	29	0	28	1

#### 7.1 QCC Errors

#### Number of QCC reports with errors:

Total number of occurrences of each error											
Product Type RLO	BOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_IOPN_2	1	1	1	1							
Product Type RLO	BOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIB IOP 2	1	1	1	1							

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

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	Total number of occurrences of each warning							
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	
SIR_IOPM1B	148	0	0	0	0	0	0	
SIR_IOPM_2	0	0	38	34	0	39	0	
SIR_IOPN1B	111	0	0	0	0	0	0	
SIR_IOPN_2	0	1	11	37	6	23	25	
SIR_IOPR1B	125	0	0	0	0	0	0	
SIR_IOPR_2	0	0	34	49	4	33	28	
Product Type	RBSZOPOEPNCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARN	CERPEPOPFDPLRMSINNCE	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	
SIR_IOPM1B	0	0	0	0	0	0	0	
SIR_IOPM_2	33	32	0	0	0	0	27	
SIR_IOPN1B	0	0	0	0	0	0	0	
SIR_IOPN_2	18	0	0	28	0	37	0	
SIR_IOPR1B	0	0	0	0	0	0	0	
SIR_IOPR_2	11	0	50	0	58	0	0	
Product Type	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	
SIR_IOPM1B	0	0	0	0	0	0	0	
SIR_IOPM_2	0	0	4	28	0	4	36	
SIR_IOPN1B	0	0	0	0	0	0	0	
SIR_IOPN_2	0	34	22	47	55	37	30	
SIR_IOPR1B	0	0	0	0	0	0	0	
SIR_IOPR_2	49	0	3	67	32	7	41	
				-	1			
Product Type	RSWHOEPFDPLRMNC	DF RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-	
SIR_IOPM1B	0	0	1	0	0	0		
SIR_IOPM_2	0	1	1	0	0	0		
SIR_IOPN1B	0	0	0	0	52	4		
SIR_IOPN_2	33	17	0	1	0	0		
SIR_IOPR1B	0	0	0	0	128	7		
SIR_IOPR_2	52	6	0	0	0	0		
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN		
SIR_IOP_2_	12	29	29	8	29	17	28	
			PPEPOPONNOPE	POOPOONODE	DOOLLAOFDNODE		DOOLLAONODE	
Product Type			RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	
SIR_IOP_2_	18	29	26	17	29	18	26	
Due due t Tu	DOWHOEDEDNODE							
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCD		SPHLPQWNCDF	-	•	-	
SIR_IOP_2_	29	17	16	29				
Dreduct Ture								
SIR IOP 2	-	•	•	-	-	•	-	

Test Description Key:							
Abbreviation	Test name	Details					
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter					
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)					
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees					
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only					
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean					
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean					
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSWHOEPFDPLRMNC DF	${\tt RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF}$	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					

## Number of products with missing QCC reports:

L1B and L2 Product name n/a

1

P2P Product name CS\_OFFL\_SIR\_IOP\_2\_\_20230601T231732\_20230602T000708\_C002