



CRYDSAT	QA4EO Daily Repo	ort for IOP data:	<u>17/03/2022</u>	IDEAS-QAHE
chrosh		1. Overview		
		Check	L1 & L2	P2P
eport Production:	21-Mar-2022	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
		Product Software Check Product Format Check	Nominal Nominal	Nominal
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	
		Range, SWH & Backscatter Measurement Che Ocean Retracking Quality Check	ck See Section 5.6 See Section 5.7	See Section 6.6 See Section 6.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2
				- <b>I</b> .
6-Mar-2022 None	vs			
7-Mar-2022 None				
8-Mar-2022 Nothing pl	lanned			
		2. Global Coverage		
				Mode Coverage LRM SAR SARin
e SIRAL instrument con	figuration for the day of acquisition is provided bel	3. Instrument Configuration		
SIRAL instrument(s	s) in use: SIRAL - A			
	· · · ·			
		OP Level 1B Data Quality 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

4.2 L1B Product Header Analysis			
For all products, a series of pre-defined checks are performed on the MPH and S	PH in order to identify any inco	nsistencies and/	or errors raised by the ground-segment processing chain.
> L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B	IOPR and IOPN products beca	ause the 11b pro	cessing quality hr field is not correctly configured in the OSAR and
OSARIn chains. A modification is required in the next release.			
Number of products with errors: 0			
4.3 L1B Auxilary Data File Usage Check			
4.5 LTD Auxiliary Data File Usage Check			
Each product is checked for missing Data Set Descriptors with respect to a pre-d	etermined baseline and also to	check the validi	ty of Auxiliary Data Files is correct.
Number of products with errors: 0			
4.4 L1B Auxiliary Correction Error Check			
CryoSat L1B data includes a correction error flag for each measurement record.	The bit value of this flag indicate		when set
Number of products with errors: 0	The bit value of this hag indicate	sa any problema	when set.
4.5 L1B Measurement Confidence Data Check			
CryoSat L1B data includes a measurement confidence flag for each measuremer	nt record. The bit value of this fl	ag indicates any	problems when set.
> Attitude Correction Missing: This flag is currently set in error for IOPR produc	cts due to a configuration issue	. The attitude co	rrection is actually not missing. This will be resolved in the next SW update
Number of products with errors: 1			
Product	Test Failed		Description
CS_OFFL_SIR_IOPM1B_20220317T042817_20220317T042845_C001	Power scaling error		There is an error in the scaling of the L1B waveform for one or more
	Ŭ		records
4.6 L1B Waveform Group Data Check			
CryoSat L1B data includes a waveform data flag for each measurement record. T	he bit value of this flag indicate	s anv problems	when set.
Loss of Echo Flag: This flag is currently set for products over land, but this is to	C C	,	
Number of products with errors: 15			
Buoduat	Test Failed		Description
Product CS OFFL SIR IOPM1B 20220317T025438 20220317T025600 C001	Loss of Echo		Description The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220317T060415_20220317T060606_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20220317T105241_20220317T105713_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220317T030558_20220317T030949_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220317T061519_20220317T061732_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220317T184746_20220317T184855_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220317T202804_20220317T202928_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20220317T225318_20220317T225529_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T011732_20220317T011833_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T060607_20220317T060926_C001 CS_OFFL_SIR_IOPR1B_20220317T062615_20220317T062746_C001	Loss of Echo Loss of Echo		The tracking echo is missing for one or more records The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T085152_20220317T085801_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T111427_20220317T112046_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T143802_20220317T143939_C001	Loss of Echo		The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20220317T192153_20220317T192502_C001	Loss of Echo		The tracking echo is missing for one or more records
5 101	Level 2 Data Qua	lity Choo	k
5. Ю			R
5.1 L2 Product Format Check			
Each product, retrieved and unpacked from the science server, is checked to ens	sure it consists of both an XML	header file (.HD	R) 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 S	PH in order to identify any inco	nsistencies and/	or errors raised by the ground-segment processing chain.
Number of products with errors: 0			
5.3 L2 Auxiliary Data File Usage Check			
5.5 LZ Auxiliary Data The Usage Check			
Each product is checked for missing Data Set Descriptors with respect to a pre-d	etermined baseline and also to	check the validi	ty of Auxiliary Data Files is correct.
Number of products with errors: 0			
5.4 L2 Auxiliary Correction Error Check			
For all products, the auxiliary corrections within the Geophysical Group are check	red for the default error value (?	2767)	
Currently, there are some common auxiliary correction errors raised in the			surface type. All common flags are summarised in the list below
followed by a table highlighting any additional issues which may arise from			
> ECMWF Meteo Corrections: Currently the following corrections are not computed and the U-Wind and V-Wind components of the ECMWF model wind vector. This in the table below.			
> Sea State Bias & Sea State Bias PLRM: The error value is currently set for pr	oducts over sea ice, but this is	to be expected	
> Sea State bias & Sea State bias PLNM: The error value is currently set for products over land and			
	•		
> Mean Dynamic Topography: The error value is currently set for products ove A timetric Wind Speed Error: The error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and a set for products and the error value is currently set for products and the error value is currently set for products and a set for pr			
> Altimetric Wind Speed Error: The error value is currently set for products over Number of products with errors: 49	n ianu anu sea ice, dul triis is to	be expected.	
Number of products with errors: 49			
Product	Test Failed Mean Sea Surface (1), M	lean Dynamic	Description
CS_OFFL_SIR_IOPM_2_20220317T174645_20220317T174730_C001	Topography (1), Total G Ocean Tide (GOT), Tota Ocean Tide (FES), Non- Long Period Ocean Tide	eocentric I Geocentric Equilibrium	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and tidal corrections for one or more records

CS_OFFL_SIR_IOPM_2_20220317T203834_20220317T205646_C001	м
CS_OFFL_SIR_IOPN_2_20220317T003619_20220317T003851_C001	м
CS_OFFL_SIR_IOPN_2_20220317T020619_20220317T020740_C001	м
CS_OFFL_SIR_IOPN_2_20220317T030558_20220317T030949_C001	м
CS_OFFL_SIR_IOPN_2_20220317T034609_20220317T034936_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T052517_20220317T052838_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T053353_20220317T0535517_C001	м
CS_OFFL_SIR_IOPN_2_20220317T061519_20220317T061732_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T071251_20220317T071402_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T075529_20220317T075635_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T084953_20220317T085152_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T103625_20220317T103739_C001	м
CS_OFFL_SIR_IOPN_2_20220317T110913_20220317T111427_C001	м
CS_OFFL_SIR_IOPN_2_20220317T115908_20220317T120214_C001	М
CS_OFFL_SIR_IOPN_2_20220317T120856_20220317T121125_C001	м
CS_OFFL_SIR_IOPN_2_20220317T124855_20220317T125250_C001	м
CS_OFFL_SIR_IOPN_2_20220317T142507_20220317T142943_C001	т
CS_OFFL_SIR_IOPN_2_20220317T151839_20220317T152003_C001	м
CS_OFFL_SIR_IOPN_2_20220317T162804_20220317T162932_C001	м
CS_OFFL_SIR_IOPN_2_20220317T183806_20220317T184113_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T184354_20220317T184740_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T201833_20220317T202107_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T211345_20220317T211502_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T215332_20220317T215944_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T225318_20220317T225529_C001	M To
CS_OFFL_SIR_IOPN_2_20220317T225623_20220317T225851_C001	М
CS_OFFL_SIR_IOPN_2_20220317T233555_20220317T233733_C001	м
CS_OFFL_SIR_IOPR_2_20220317T011858_20220317T012357_C001	M To
CS_OFFL_SIR_IOPR_2_20220317T025600_20220317T030558_C001	M To
CS_OFFL_SIR_IOPR_2_20220317T043610_20220317T044452_C001	M To
CS_OFFL_SIR_IOPR_2_20220317T061732_20220317T062500_C001	M To
CS_OFFL_SIR_IOPR_2_20220317T075635_20220317T080349_C001	M Te
CS_OFFL_SIR_IOPR_2_20220317T091119_20220317T091333_C001	M
CS_OFFL_SIR_IOPR_2_20220317T093551_20220317T094244_C001	M Te
CS_OFFL_SIR_IOPR_2_20220317T111427_20220317T112046_C001	M Te
CS_OFFL_SIR_IOPR_2_20220317T125250_20220317T125339_C001	M To
CS_OFFL_SIR_IOPR_2_20220317T125339_20220317T130224_C001	M To

Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Total Geocentric	There is an error with the MSS height (solution 1) and the Total
Ocean Tide (GOT)	Geocentric Ocean Tide (solution 1: GOT) for one or more records
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)
Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
Topography (1)	Topography height (solution 1)

CS_OFFL_SIR_IOPR_2_20220317T142944_20220317T143726_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T160911_20220317T161546_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T161546_20220317T161840_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T174730_20220317T175446_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T192906_20220317T193343_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T193343_20220317T193501_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20220317T224712_20220317T224830_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20220317T224859_20220317T225317_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

# 5.5 L2 Measurement Confidence Data Check

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

## Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20220317T042817_20220317T042845_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

# 5.6 L2 Measurement Quality Flag Check

# L2 Quality Flags (20 Hz)

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

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

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

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

94

1

## Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20220316T235833_20220317T002545_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_20220317T003058_20220317T003619_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_20220317T003852_20220317T010253_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_20220317T013739_20220317T020435_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_20220317T021026_20220317T021629_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_20220317T021752_20220317T024611_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_20220317T025438_20220317T025600_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_20220317T030949_20220317T034407_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_20220317T034936_20220317T035504_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_20220317T035631_20220317T040254_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_20220317T043353_20220317T043610_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_20220317T044918_20220317T045845_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_20220317T050026_20220317T052332_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_20220317T052838_20220317T052941_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_20220317T052945_20220317T053353_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_20220317T053531_20220317T055532_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_20220317T062747_20220317T070120_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_20220317T070859_20220317T071251_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_20220317T071453_20220317T071831_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_20220317T071942_20220317T075108_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_20220317T075236_20220317T075529_C001	Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20220317T081112_20220317T081821_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_20220317T082647_20220317T084045_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_20220317T084223_20220317T084739_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_20220317T084814_20220317T084953_C001	Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20220317T085802_20220317T091119_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_20220317T091333_20220317T092535_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_20220317T095300_20220317T100157_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_20220317T100503_20220317T101958_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_20220317T102149_20220317T102651_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_20220317T103524_20220317T103625_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_20220317T104157_20220317T104745_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_20220317T105241_20220317T105713_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_20220317T105956_20220317T110545_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_20220317T113719_20220317T115908_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_20220317T120214_20220317T120609_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_20220317T120615_20220317T120624_C001	Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20220317T121206_20220317T123641_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_20220317T131306_20220317T133840_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_20220317T134001_20220317T134524_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_20220317T134530_20220317T134856_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_20220317T135111_20220317T142507_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_20220317T144937_20220317T145656_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_20220317T145658_20220317T150849_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_20220317T151154_20220317T151828_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_20220317T152003_20220317T152802_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_20220317T153044_20220317T160514_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_20220317T164706_20220317T165758_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_20220317T165938_20220317T170452_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_20220317T171012_20220317T173305_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_20220317T173551_20220317T174520_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_20220317T174645_20220317T174730_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_20220317T180948_20220317T181353_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_20220317T181558_20220317T182200_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_20220317T182347_20220317T183705_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_20220317T184113_20220317T184354_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_20220317T184953_20220317T192034_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_20220317T194000_20220317T194700_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_20220317T194719_20220317T201131_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_20220317T202107_20220317T202302_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_20220317T202511_20220317T202803_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_20220317T202933_20220317T203338_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_20220317T203428_20220317T203831_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_20220317T203834_20220317T205646_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_20220317T211502_20220317T211841_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_20220317T212015_20220317T212209_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_20220317T212408_20220317T213610_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_20220317T215158_20220317T215331_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_20220317T215944_20220317T220221_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

	OCOG Altimeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPM_2_20220317T220241_20220317T220708_C001	Backscatter Quality	set for one or more records
CS_OFFL_SIR_IOPM_2_20220317T220851_20220317T222355_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_20220317T222534_20220317T222817_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_20220317T230227_20220317T230817_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_20220317T231100_20220317T233519_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_20220317T233734_20220317T234620_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_20220317T234821_20220318T001235_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_20220317T002701_20220317T002818_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220317T011704_20220317T011731_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220317T084953_20220317T085152_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_20220317T103921_20220317T104157_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220317T105713_20220317T105835_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_20220317T113018_20220317T113415_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220317T134856_20220317T135017_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_20220317T162123_20220317T162246_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20220317T193929_20220317T194000_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T062615_20220317T062746_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T070120_20220317T070223_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T081821_20220317T082302_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T164516_20220317T164706_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T193343_20220317T193501_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T203338_20220317T203427_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T222818_20220317T223016_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_20220317T225851_20220317T225928_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (20 Hz PLRM)

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

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

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

89

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20220317T010412_20220317T010508_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_20220317T010650_20220317T010751_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_20220317T011704_20220317T011731_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_20220317T020838_20220317T021026_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_20220317T030558_20220317T030949_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_20220317T034609_20220317T034936_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_20220317T035504_20220317T035621_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_20220317T041513_20220317T041540_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_20220317T043248_20220317T043334_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_20220317T043338_20220317T043352_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_20220317T044452_20220317T044714_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_20220317T044754_20220317T044842_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_20220317T053353_20220317T053517_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_20220317T070224_20220317T070410_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_20220317T071251_20220317T071402_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_20220317T093334_20220317T093550_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_20220317T094956_20220317T095259_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_20220317T102002_20220317T102149_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_20220317T103625_20220317T103739_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_20220317T103921_20220317T104157_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_20220317T104745_20220317T105222_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_20220317T110913_20220317T111427_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_20220317T113018_20220317T113415_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_20220317T120856_20220317T121125_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_20220317T124106_20220317T124307_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_20220317T124708_20220317T124830_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_20220317T130857_20220317T131042_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_20220317T134856_20220317T135017_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_20220317T142507_20220317T142943_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_20220317T143726_20220317T143802_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_20220317T151839_20220317T152003_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_20220317T160514_20220317T160633_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_20220317T162123_20220317T162246_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_20220317T162804_20220317T162932_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_20220317T181353_20220317T181558_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_20220317T183806_20220317T184113_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_20220317T184354_20220317T184740_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_20220317T193502_20220317T193842_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_20220317T202804_20220317T202928_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_20220317T205833_20220317T210057_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_20220317T211345_20220317T211502_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_20220317T211841_20220317T212015_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_20220317T215332_20220317T215944_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_20220317T220708_20220317T220849_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_20220317T225318_20220317T225529_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_20220317T225623_20220317T225851_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_20220317T230105_20220317T230227_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_20220317T234620_20220317T234818_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_20220317T011858_20220317T012357_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_20220317T025600_20220317T030558_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_20220317T042314_20220317T042644_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_20220317T042933_20220317T043236_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_20220317T043610_20220317T044452_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_20220317T044715_20220317T044754_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_20220317T053517_20220317T053531_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_20220317T061732_20220317T062500_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

Dig. OFFL DRI DOPEL_2022017110303_DDD     bett Distance Capity 1.185 COM       Dig. OFFL DRI DOPEL_2022017110303_DDD     COM Description to the own memory and the distance Capity 7.85 Common to the distance Capity 7.85 Common		Ocean Altimeter Range, SSHA, SWH	
Control         Open Bescher Gaby         or met excert           00_0011_00_001_002_00201710000_0001         Open American A	CS_OFFL_SIR_IOPR_2_20220317T075635_20220317T080349_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
UPL DR4_ BR1 OPR 1_2020017100012_02001710002_0000     Job Backader Gally R4M, COLOR     Des Color Annuel Rescue Cally R4M, COLOR       C0_071_071_071_071_070_070011_020001710001_0700     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, COLOR       C1_071_071_071_070_070011_020001710001_07001_0700     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, COLOR       C1_071_071_071_070_07001_070011_07001_07001_07001_0700     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, COLOR       C1_071_071_071_070_07001_070011_0700_0700     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, COLOR       C1_071_071_071_070_07001_07001_07001_0700_0700     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, COLOR       C1_071_071_071_070_0700_07001_07001_0700_07001     Des Color Annuel Rescue Cally R4M, COLOR     The Color Annuel Rescue Cally R4M, R4M, COLOR       C1_0771_071_071_070_0700_07001_0700_0700	CS_OFFL_SIR_IOPR_2_20220317T091119_20220317T091333_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
C2. OFTL SR. OPTL 2. 202201710351_2022017103634_0001 bdfs trible base and b	CS_OFFL_SIR_IOPR_2_20220317T092535_20220317T093059_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CD_DFT_SR_DOPL_2.0202017110050_D020117110050_D021     CD_DDED_SR_D011710050_D021017110050_D0220177110050_D0220177110050_D0220177110050_D0220177110050_D0220177110050_D02107010700_D0210700000	CS_OFFL_SIR_IOPR_2_20220317T093112_20220317T093334_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
COUNT_GROUPL_CARCENT IT INSEE_CARCENT IT INSEE_CARCENT IT INSEE_CARCENT COUNT CARCENT CARLY FLAT         The COOR Plange and Backender Carly FLAT           CBOFFL_SR_COPR_2_022201171110918_02220117110918_0220117110918_0022011711091	CS_OFFL_SIR_IOPR_2_20220317T093551_20220317T094244_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
Control and John Jackson Microsoft (1998)         Control Betweet (1998)         Control Betweet (1998)           Control and John Jackson Microsoft (1998)         Control Betweet (1998)         Control Betweet (1998)         Control Betweet (1998)           Control and John Jackson Microsoft (1998)         Control Betweet (1998)         Control Betweet (1998)         Control Betweet (1998)         Control Betweet (1998)           Control Betweet (1998)	CS_OFFL_SIR_IOPR_2_20220317T100323_20220317T100502_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFTL_SR_UOPL_2.0220017119019_020001711904_0001 DisplayEnd Displ	CS_OFFL_SIR_IOPR_2_20220317T102652_20220317T102658_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SR_OPR_2.30220117111429_202031711024_0011         Intel the State of	CS_OFFL_SIR_IOPR_2_20220317T110708_20220317T110913_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CB, OFFL_SIR_UPR_2_2020017T102509_20220017T102509_2020017T1102509_200017T1102509_20001	CS_OFFL_SIR_IOPR_2_20220317T111427_20220317T112046_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CS_OFFL_SIR_UOPR_2_20220317T143982_20220317T1515152_20210              Coco Attranetr Range Cuality FLMM Coco Attranetr Range SLM, SWH and Backacatter Cuality FLMM Coco Attranetr Range SLM, SWH and Backacatter Cuality FLMM Coco Attranetr Range SLMM, SWH and Backacatter Cuality FLMM Cocoo Attranetr Range SLMM, SWH and Backacatter Cuality FLMM Cocoon Attranetr Range SLMM, SWH and Backacatter Cuality FL	CS_OFFL_SIR_IOPR_2_20220317T125339_20220317T130224_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
GS_OFFL_SR_JOPR_2_20220317T14902_2020317T14902_2020317T14902_2020317T14924_0001     Interstitute Targe and Backscatter Cuality FLM. CCCG Allmeter Targe and Backscatter Cuality FLM. CCCG Allmeter Targe Quality FLM. CCCG Allmeter Targe QUAL	CS_OFFL_SIR_IOPR_2_20220317T142944_20220317T143726_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
OPE         OPE         OPE         OPE         OPE         OPE           05.0PFL_SIR_UOPR_2_0220317T16944_0220317T15159_0001         Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FILm         The OCOG Range and Mineter Range, SSHA, SWH and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_0220317T169514_00200317T16156_0001         OCOG Randeater Quality FILm         The OCOG Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_0220317T169511_20220317T161546_0001         OCOG Randeater Quality FILm         The OCOG Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_02020317T161546_0001         OCOG Randeater Quality FILm         The OCOG Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_00220317T161546_0020317T161540_0001         OCOG Randeater Quality FILm         The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_00220317T161546_0020317T161540_0001         OCOG Randeater Quality FILm         The Ocean Altimeter Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_00220317T175466_0001         OCOG Randeater Quality FILm         The Ocean Altimeter Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_00220317T175446_0001         OCOG Randeater Guality FILm         The Ocean Altimeter Range and Backscatter Quality FILm           05.0PFL_SIR_UOPR_2_00220317T175446_0001         OCOG Randeater Guality FILm         The Ocean Altimeter Range and Backscatter Quality FILm               05.0PFL_SIR_UOPR_2_00220317T175746_0001<	CS_OFFL_SIR_IOPR_2_20220317T143802_20220317T143939_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
GS_OFFL_SIR_IOPR_2_20220317T150849_20220317T15153_C001       and Backscatter Guilty PLM, OCCO Attender Range and Backscatter Guilty PLM       IPM dotabacter Guilty FLM         GS_OFFL_SIR_IOPR_2_20220317T16054_20220317T160729_C001       OCC6A Minnerer Range, OLIMIP FLM       To OCCOA Backscatter Guilty PLM, OCCOA Attender Range and Backscatter Guilty PLM, OCCOA Attender Range, SSHA, SWH and Backscatter Guilty FLM, The OCCOA Bander Range and Backscatter Guilty FLM, The OCCOA Bander Range SSHA, SWH and Backscatter Guilty FLM, The OCCOA Bander Range Guilty PLM, OCCOA Attender Range, SSHA, SWH and Backscatter Guilty FLM, The OCCOA Bander Range Guilty PLM, OCCOA Bander Range, SSHA, SWH and Backscatter Guilty FLM, The OCCOA Bander Range Guilty PLM, OCCOA Bander Range, SSHA, SWH	CS_OFFL_SIR_IOPR_2_20220317T144029_20220317T144224_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
OCC         Backscater Quality         or more records           CS_OFFL_SIR_IOPR_2_20220317T160911_20220317T161546_C001         Occean Attimeter Range and Backscater Quality PLRM, OCCO Attimeter Range and Backscater Quality Flags have been set for o or more records           CS_OFFL_SIR_IOPR_2_20220317T192153_20220317T192532_C001         OCCG Attimeter Range ASH, SWH and Backscater Quality PLRM, OCCO Attimeter Range and Backscater Quality Flags have been set for o or more records           CS_OFFL_SIR_IOPR_2_20220317T192153_2020317T192582_C001	CS_OFFL_SIR_IOPR_2_20220317T150849_20220317T151153_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
GS_OFFL_SIR_IOPR_2_20220317T16046_0001       and Backscatter Quality PLRM. COCO Altimeter Range and Backscatter Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T161546_20220317T161640_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T161546_20220317T161640_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T17620_00200317T176224_0001       OCCOG Backscatter Quality PLRM. COCOG Backscatter Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T17546_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T17546_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for oor more records         CS_OFFL_SIR_IOPR_2_20220317T17546_00200317T175709_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Plags have been set for oor more records         CS_OFFL_SIR_IOPR_2_20220317T192502_0001       OCCG Altimeter Range Quality PLRM, OCCG Range and Backscatter Quality Flags have been set for or more records         CS_OFFL_SIR_IOPR_2_20220317T192502_0001       OCCG Altimeter Range Quality PLRM, OCCG Range and Backscatter Quality Flags have been set for or more records         CS_OFFL_SIR_IOPR_2_20220317T192502_0001       OCCG Altimeter Range Quality PLRM, OCCG Range and Backscatter Quality Flags have been set for or more records         CS_OFFL_SIR_IOPR	CS_OFFL_SIR_IOPR_2_20220317T160634_20220317T160729_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_JOPR_2_20220317T161546_20220317T161840_C001       and Backscatter Quality PLRM OCOG Altimeter Range and Backscatter Quality PLRM DCOG Backscatter Quality PLRM DCGA Backscatter Quality PLRM DCGG Backscatter Quality PLRM DGGG Backscatter Quality PLRM DGGGG	CS_OFFL_SIR_IOPR_2_20220317T160911_20220317T161546_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
US_OFFL_SIR_IOPR_2_20220317T17462_20001       OCOG Backscatter Quality       or more records         CS_OFFL_SIR_IOPR_2_20220317T174730_20220317T175446_0001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM. Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM. CGS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_0001       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality FLRM. Ocean Altimeter Range and Backscatter Quality PLRM. OCGG Altimeter Range and Backscatter Quality PLRM. OCGG Backscatter Quality PLRM.       The OCOGA Range and Backscatter Quality FLRM. The OCOGA Range and Backscatter Quality FLRM.         CS_OFFL_SIR_IOPR_2_20220317T192153_20220317T192502_0001       OCOG Altimeter Range Quality PLRM. OCOG Backscatter Quality PLRM.       The OCOGA Range and Backscatter Quality FLRSA and Backsca	CS_OFFL_SIR_IOPR_2_20220317T161546_20220317T161840_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
CS_OFFL_SIR_IOPR_2_20220317T174730_20220317T175446_C001       Ind Backscatter Quality PLRM, OCOG Alimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_C001       Ind Backscatter Quality PLRM, OCOG Alimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Alimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T192153_20220317T192502_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for o or more records         CS_OFFL_SIR_IOPR_2_20220317T192734_20220317T192502_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for o or more records         CS_OFFL_SIR_IOPR_2_20220317T192734_20220317T192502_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality       The OCOG Range and Backscatter Quality Flags have been set for o or more records         CS_OFFL_SIR_IOPR_2_20220317T192906_20220317T192806_20220317T192832_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T201132_20220317T20183_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T20174_20220317T201832_C001       OCOG Altimeter Range, SSHA, SWH and B	CS_OFFL_SIR_IOPR_2_20220317T174520_20220317T174624_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_C001       and Backscatter Quality PLRM, OCCG Alimeter Range and Backscatter Quality PLRM, OCOG Batimeter Range and Backscatter Quality PLRM, OCOG Batimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         S_OFFL_SIR_IOPR_2_20220317T210714_20220317T21124_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPR_2_20220317T174730_20220317T175446_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CS_OFFL_SIR_IOPR_2_20220317T192734_20220317T19250_C001       OCOG Backscatter Quality       or more records         CS_OFFL_SIR_IOPR_2_20220317T192734_20220317T192850_C001       OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality FLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T205646_20220317T205828_C001       OCOG Altimeter Range, Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       Ocean	CS_OFFL_SIR_IOPR_2_20220317T175446_20220317T175703_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
CS_OFFL_SIR_IOPR_2_20220317T19206_20220317T193343_C001       OCOG Backscatter Quality       or more records         CS_OFFL_SIR_IOPR_2_20220317T19206_20220317T193343_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and Backscatter Quality PLRM, OCOG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter Range and B	CS_OFFL_SIR_IOPR_2_20220317T192153_20220317T192502_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T192906_20220317T193343_C001       and Backscatter Quality PLRM, OCCG Attimeter Range and Backscatter Quality PLRM       Interformation and the OCGG Attimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T201132_20220317T201833_C001       Decem Attimeter Range Quality PLRM, OCCG Attimeter Range and Backscatter Quality PLRM, OCCG Attimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T2015646_20220317T205828_C001       OCCG Attimeter Range Quality PLRM, OCCG Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for or or more records         CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001       Occean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range and Backscatter Quality PLRM       The OCCG Attimeter Range, SSHA, SWH and the OCCG Attimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211244_C001       Occean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCCG Attimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPR_2_20220317T192734_20220317T192850_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T201132_20220317T201833_C001       and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T205646_20220317T205828_C001       OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Backscatter Quality PLRM, OCOG       The OCOG Range and Backscatter Quality Flags have been set for or or more records         CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality PLRM         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG	CS_OFFL_SIR_IOPR_2_20220317T192906_20220317T193343_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
CS_OFFL_SIR_IOPR_2_202203171205646_202203171205648_20001       OCOG Backscatter Quality       or more records         CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have have and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have and Backscatter Quality Flags have and the OCOG Altimeter Range and Backscatter Quality Flags have	CS_OFFL_SIR_IOPR_2_20220317T201132_20220317T201833_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter	
CS_OFFL_SIR_IOPR_2_20220317T2110714_20220317T211221_C001       and Backscatter Quality PLRM, OCOG       Interest Range and Backscatter Quality PLRM, OCOG         Attimeter Range       and Backscatter Quality PLRM       Ocean Altimeter Range, and Backscatter Quality Flags have         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       and Backscatter Quality PLRM, OCOG       The Ocean Altimeter Range, SSHA, SWH         CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001       and Backscatter Quality PLRM, OCOG       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have	CS_OFFL_SIR_IOPR_2_20220317T205646_20220317T205828_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001 and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPR_2_20220317T210714_20220317T211221_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	
	CS_OFFL_SIR_IOPR_2_20220317T211221_20220317T211344_C001	and Backscatter Quality PLRM, OCOG	
CS_OFFL_SIR_IOPR_2_20220317T213610_20220317T213823_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have been set for o or more records	CS_OFFL_SIR_IOPR_2_20220317T213610_20220317T213823_C001		The OCOG Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPR_2_20220317T223018_20220317T223153_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_20220317T224712_20220317T224830_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_20220317T224859_20220317T225317_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_20220317T225851_20220317T225928_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_20220317T230009_20220317T230104_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, which are summarised below.

186

67

128

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

Number of products with errors:

## 5.8 L2 Ocean Retracking Quality Check

## L2 Retracking Flags (20 Hz)

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

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

Number of products with errors:

# L2 Retracking Flags (20 Hz PLRM)

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

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

Number of products with errors:

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

## 6.1 P2P Product Format Check

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

Number of products with errors:

#### 6.2 P2P Product Header Analysis

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

Number of products with errors:

## 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

## 6.4 P2P Auxiliary Correction Error Check

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

Currently, there are some common auxiliary correction errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below,

followed by a table highlighting any additional issues which may arise from this test.

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

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

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

28

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

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

#### Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220220317T003150_20220317T012130_C001	Mean Sea Surface (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_220220317T012130_20220317T021105_C001	Mean Sea Surface (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_220220317T021105_20220317T030044_C001	Mean Sea Surface (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_220220317T030044_20220317T035020_C001	Mean Sea Surface (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_220220317T035020_20220317T043959_C001	Mean Sea Surface (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_220220317T043959_20220317T052934_C001	Mean Sea Surface (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_220220317T052934_20220317T061914_C001	Mean Sea Surface (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_220220317T061914_20220317T070849_C001	Mean Sea Surface (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_220220317T070849_20220317T075828_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

		L
CS_OFFL_SIR_IOP_220220317T075828_20220317T084803_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_220220317T084803_20220317T093743_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_220220317T093743_20220317T102718_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_220220317T102718_20220317T111658_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T111658_20220317T120633_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T120633_20220317T125612_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T125612_20220317T134548_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_220220317T134548_20220317T143527_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_20220317T143527_20220317T152502_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_220220317T152502_20220317T161442_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T161442_20220317T170417_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_220220317T170417_20220317T175356_C001	Mean Sea Surrace (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (EFS) Non-Fruilibrium	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_20220317T175356_20220317T184332_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T184332_20220317T193311_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T193311_20220317T202246_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynam Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T202246_20220317T211226_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T211226_20220317T220201_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T220201_20220317T225140_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20220317T225140_20220317T234116_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynami Topography height (solution 1)
6.5 P2P Measurement Confidence Data Check		
CryoSat P2P data includes a measurement confidence flag for each 20-Hz mea	surement record. The bit value of this flag indica	ates any problems when set.

# Number of products with errors: 1

Product		Test Failed	Description		
CS_OFFL_SIR_IOP_220220317T035020_20220317T043959_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 F	Flag Check				
P2P Quality Flags (20 Hz)					
CryoSat P2P data includes Quality Flags for e	each 20 Hz, 20 Hz PLRM and 1 H	z measurement record, copied from th	ne corresponding L2 products.		
Since the P2P Quality Flags are copied directly	ectly from the L2 Quality Flags,	please see Section 5.6 for the full	list of products affected.		
Number of products with errors: 30					
P2P Quality Flags (20 Hz PLRM)					
Since the P2P Quality Flags are copied directly	ectly from the L2 Quality Flags,	, please see Section 5.6 for the full	list of products affected.		
Number of products with errors:	30				
P2P Quality Flags (1 Hz & 1 Hz PLI	RM)				
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags,	please see Section 5.6 for the full	list of products affected.		
Number of products with errors:	30				
6.8 P2P Ocean Retracking Qua	lity Check				
P2P Retracking Flags (20 Hz)					
Cryosat P2P data includes an ocean retrackin	ng quality flag (field 19) for each 2	0 Hz measurement record. The bit va	lue of this flag indicates any problems when set.		
> Ocean Retracking Quality Flag (PLRM):	This flag is currently set for produc	cts IOPR and IOPN products over sea	a ice, but this is to be expected.		
Number of products with errors:	29				
P2P Retracking Flags PLRM					
CryoSat L2 data includes an ocean retracking	quality flag for each 20 Hz PLRN	I 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.

30

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	182	182	2	180	0
SIR_IOPR1B	123	104	2	99	3
SIR_IOPN1B	104	123	0	123	0
SIR_IOPM_2	182	182	124	58	0
SIR_IOPR_2	123	101	41	60	0
SIR_IOPN_2	101	123	52	70	1
SIR_IOP_P2P	29	29	0	28	1

# 7.1 QCC Errors

Number of QCC reports with errors: 13			l -								
Total number of occurrences of each error											
Product Type	LOBOPNCDF	RL	RLOBOPNCDF	RL	RRTAISSOP	OBHRNCDF	-	-	-	-	-
SIR_IOPN1B	0	0	0	0	:	3					
SIR_IOPR_2	1	1	1	1		0					
Product Type	LOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_IOP_2_	1	1	1	1							
Test Description	n Key:										
Abbreviation	Test na	me		Details							
RLOBOPNCDF	RangeLa	titudeOrBlankOP_	7NetCDF	Latitude should be	e between -90E7 ar	nd 90E7					
RL	RangeLa	ititude_7		Latitude should be between -90E7 and 90E7							
RLOBOPNCDF	RangeLo	ngitudeOrBlankOF	P_7NetCDF	Longitude should be between -180E7 and 180E7							
RL	RangeLo	ngitude_7		Longitude should be between -180E7 and 180E7							
RRTAISSOPOBI	HRNCDRangeRe	ecordTAIStartStop	OPOrBlankHRNetCDF	The time value sh	ould be between th	e the record TAI st	art/stop times of th	e MPH with a marg	in of 0.5 s - NetCD	F	

7.2 QCC Warnings Number of QCC reports with warning

ber of QCC repo			Total number	of occurrences of e	ach warning		
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRM
SIR IOPM1B	180	0	0	0	0	0	0
SIR IOPM 2	0	0	44	45	1	42	0
SIR IOPN1B	99	0	0	0	0	0	0
SIR IOPN 2	0	0	10	30	1	24	27
SIR IOPR1B	121	0	0	0	0	0	0
SIR_IOPR_2	0	1	20	31	1	23	15
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSAR		DRPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR IOPM1B	0	0	0	0	0	0	0
SIR IOPM 2	36	0	35	0	0	0	0
SIR IOPN1B	0	0	0	0	0	0	0
SIR IOPN 2	17	1	0	0	19	0	27
SIR IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	8	6	0	36	0	44	0
	0	•	°		0		0
Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	24	0	0	7	27	0	6
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	22	21	47	53	36
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	34	0	2	50	26	8
Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR IOPM1B	0	0	0	0	0	0	
SIR IOPM 2	41	0	4	0	0	0	
SIR IOPN1B	0	0	0	0	46	2	
SIR IOPN 2	29	31	15	0	0	0	
SIR IOPR1B	0	0	0	0	123	10	
SIR_IOPR_2	24	33	2	4	0	0	
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	
SIR IOP 2	18	28	28	3	29	17	28
	10	20	20	0	20		20
		RPEPOPFDPLRMSINNCDF	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCD
Product Type	RNELPOTONCDF						
Product Type SIR IOP 2	6	17	28	20	24	29	17
	6	17	28			29	17
SIR_IOP_2_ Product Type	6 RSSHAONCDF	17 RSWHOEPFDNCDF	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	17
SIR_IOP_2_	6	17	28			-	-
SIR_IOP_2_ Product Type SIR_IOP_2_	6 RSSHAONCDF	17 RSWHOEPFDNCDF	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	29 	17 
SIR_IOP_2_ Product Type	6 RSSHAONCDF	17 RSWHOEPFDNCDF	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	29  -  -	17 - -
SIR_IOP_2_ Product Type SIR_IOP_2_ Product Type SIR_IOP_2_	6 RSSHAONCDF 27 -	17 RSWHOEPFDNCDF	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	29 - -	17 •
SIR_IOP_2_ Product Type SIR_IOP_2_ Product Type SIR_IOP_2_ est Description Key	6 RSSHAONCDF 27	17 RSWHOEPFDNCDF	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF 16	SPHLPQWNCDF	29 - -	17 •
SIR_IOP_2_ Product Type SIR_IOP_2_ Product Type	6 RSSHAONCDF 27 -	17 RSWHOEPFDNCDF 28 -	28 RSWHOEPFDPLRMNCDF	RSWHOEPNCDF 16 - Details	SPHLPQWNCDF	•	17 • •

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
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSIN NCDF	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
	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
RSWHOEPFDPLRMN CDF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

0

7.3 Missing QCC Reports

Number of products with missing QCC reports: