

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

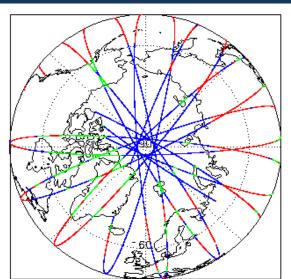
<u>30/12/2020</u>

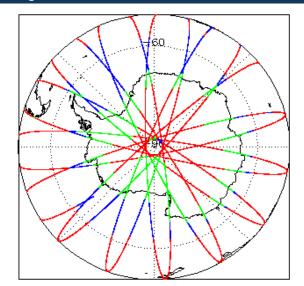
Papart Braduction	28-Jan-2021	Check	L1 & L2	P2P
Report Production:	28-Jan-2021	Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Processor Used:	CryoSat Ocean Processor	Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Processor Useu.	CryoSal Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Geophysical Ocean Products (GOP)	Product Format Check	Nominal	Nominal
Data Useu.	L1B, L2 & P2P Science Data	Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6	Nominal
		Range, SWH & Backscatter Measurement Check	See Section 5.6	See Section 6.6
		Ocean Retracking Quality Check	See Section 5.7	See Section 6.7
		QCC Error/ Warning Check	See Section 7.1 and 7.2	See Section 7.1 and 7.2

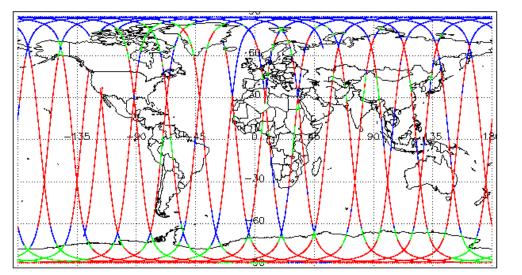
1. Overview

Mission / Instru	iment News
29-Dec-2020	SIRAL unavailability from 29-12-2020 10:55:06 to 12:26:39 missing all SIRAL data SIRAL unavailability from 29-12-2020 07:46:45 to 09:56:05 missing SARIN-1 and SAR data
30-Dec-2020	None
31-Dec-2020	Nothing planned













# 3. Instrument Configuration

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

SIRAL instrument(s) in use:

SIRAL - A

0

# 4. GOP Level 1B Data Quality Check

### 4.1 L1B Product Format Check

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

4.2 L1B Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and S	PH in order to identify any inconsistencies	and/or errors raised by the ground-segment processing chain.
L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B C	SOPR and GOPN products because the I1t	p_processing_quality_hr field is not correctly configured in the OSAR and
OSARIn chains. A modification is required in the next release.		
Number of products with errors: 0		
4.3 L1B Auxilary 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 v	alidity of Auxiliary Data Files is correct
Number of products with errors: 0		
4.4 L1B Auxiliary Correction Error Check		
•		
CryoSat L1B data includes a correction error flag for each measurement record.	The bit value of this flag indicates any prob	lems when set.
Number of products with errors: 0		
4.5 L1B Measurement Confidence Data Check		
CryoSat L1B data includes a measurement confidence flag for each measurement	nt record. The bit value of this flag indicates	s any problems when set.
Attitude Correction Missing: This flag is currently set in error for GOPR produc	ts due to a configuration issue. This is bein	g investigated and will be updated in the next SW update.
Number of products with errors: 0		
4.6 L1B Waveform Group Data Check		
CryoSat L1B data includes a waveform data flag for each measurement record.	The bit value of this flag indicates any probl	ems when set.
Loss of Echo Flag: This flag is currently set for some products over land, but thi	s is to be expected.	
Number of products with errors: 13		
Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20201230T034602_20201230T040734_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20201230T115822_20201230T122315_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20201230T200930_20201230T202146_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T014236_20201230T014331_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T045720_20201230T045808_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T064107_20201230T064209_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T081901_20201230T082112_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T123427_20201230T123606_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T150238_20201230T150328_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T182406_20201230T182525_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20201230T213840_20201230T214429_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20201230T073734_20201230T074009_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20201230T171758_20201230T172456_C001	Loss of Echo	The tracking echo is missing for one or more records
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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 (	.HDR) and a binary product file (.DBL).
Number of products with errors: 0		
5.2 L2 Product Header Analysis		
For all products, a series of pre-defined checks are performed on the MPH and S	PH in order to identify any inconsistencies	and/or errors raised by the ground-segment processing chain.
Number of products with errors: 0		
5.3 L2 Auxiliary Data File Usage Check		
Each product is checked for missing Data Set Descriptors with respect to a pre-d	etermined baseline and also to check the v	alidity 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 Currently, there are some common auxiliary correction errors raised in the		a to surface type. All common flags are summarized in the list below.
followed by a table highlighting any additional issues which may arise from		e to surface type. An common mays are summarised in the list below,
> ECMWF Meteo Corrections: Currently the following corrections are not comp Correction and the U-Wind and V-Wind components of the ECMWF model wind not reported 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 expec	ted.
> Altimetric Wind Speed Error: The error value is currently set for products over	er land and sea ice, but this is to be expected	d.
Number of products with errors: 54		
Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20201230T012811_20201230T012946_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20201230T042403_20201230T044337_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records

CS_OFFL_SIR_GOPM_2_20201230T133711_20201230T133846_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPM_2_20201230T193254_20201230T194217_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T001004_20201230T001013_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T005211_20201230T005601_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20201230T014236_20201230T014331_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T023155_20201230T023508_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T024022_20201230T024136_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T040914_20201230T041338_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T041926_20201230T042044_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T055656_20201230T055843_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T064107_20201230T064209_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T073507_20201230T073734_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T081901_20201230T082112_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T091412_20201230T091830_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T095543_20201230T095935_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T100446_20201230T100521_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T104531_20201230T104802_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T105526_20201230T105708_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T123427_20201230T123606_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T140435_20201230T140554_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T141124_20201230T141440_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) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T150238_20201230T150328_C001		
C3_011E_311C_G0F10_2_202012301130230_202012301130320_0001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1)	
		or more records There is an error with the Mean Dynamic Topography (solution 1) for one
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001	Mean Dynamic Topography (1)	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001 CS_OFFL_SIR_GOPN_2_20201230T155022_20201230T155337_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Tide for one or more records
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001 CS_OFFL_SIR_GOPN_2_20201230T155022_20201230T155337_C001 CS_OFFL_SIR_GOPN_2_20201230T172456_20201230T172733_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001 CS_OFFL_SIR_GOPN_2_20201230T155022_20201230T155337_C001 CS_OFFL_SIR_GOPN_2_20201230T172456_20201230T172733_C001 CS_OFFL_SIR_GOPN_2_20201230T172927_20201230T173509_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001 CS_OFFL_SIR_GOPN_2_20201230T155022_20201230T155337_C001 CS_OFFL_SIR_GOPN_2_20201230T172456_20201230T172733_C001 CS_OFFL_SIR_GOPN_2_20201230T172927_20201230T173509_C001 CS_OFFL_SIR_GOPN_2_20201230T182014_20201230T182149_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOPN_2_20201230T150551_20201230T150724_C001 CS_OFFL_SIR_GOPN_2_20201230T154401_20201230T154515_C001 CS_OFFL_SIR_GOPN_2_20201230T155022_20201230T155337_C001 CS_OFFL_SIR_GOPN_2_20201230T172456_20201230T172733_C001 CS_OFFL_SIR_GOPN_2_20201230T172927_20201230T173509_C001 CS_OFFL_SIR_GOPN_2_20201230T182014_20201230T182149_C001 CS_OFFL_SIR_GOPN_2_20201230T190325_20201230T190633_C001	Mean Dynamic Topography (1) Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide Mean Sea Surface (1), Mean Dynamic Topography (1) Mean Sea Surface (1), Mean Dynamic	or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the Mean Dynamic Topography (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records There is an error with the MSS height (solution 1) and the Mean Dynamic

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CS_OFFL_SIR_GOPR_2_20201230T000005_20201230T001004_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T013232_20201230T013411_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T014331_20201230T015121_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T032307_20201230T033348_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the GPD Wet Tropospheric correction, the MSS height (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_GOPR_2_20201230T050303_20201230T051037_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T064209_20201230T064737_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T081103_20201230T081218_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T082112_20201230T082805_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T084149_20201230T085005_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T095936_20201230T100446_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T113709_20201230T114506_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T131542_20201230T132313_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T132701_20201230T132839_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T133224_20201230T133415_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T145124_20201230T150113_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T150113_20201230T150238_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T163320_20201230T164012_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T164012_20201230T165517_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T181300_20201230T181848_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T181848_20201230T182014_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T190127_20201230T190325_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T195248_20201230T195619_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T195619_20201230T195925_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T213310_20201230T213840_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) for one or more records
CS_OFFL_SIR_GOPR_2_20201230T231357_20201230T231858_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) for one or more records

### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

### 5.6 L2 Measurement Quality Flag Check

### L2 Quality Flags (20Hz)

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

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

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

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

0

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Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20201230T001811_20201230T004837_C001	<b>3</b>	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

Bits Diff. 2000         Description         Description         In the origination           C3         OPEL SMC OPEN 42 (2007) 2001/2011 2001/2011/2011         Description			
Bit, DFF, JEF, DFF, DFF, DFF, DFF, DFF, DFF, DFF, D	CS_OFFL_SIR_GOPM_2_20201230T005601_20201230T010149_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Circl SHL SHL GOMA 2 2001/2011/11/2 (20112011/21/2 C011       and additional frage and additional frage hashes to ad	CS_OFFL_SIR_GOPM_2_20201230T010431_20201230T011043_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CB_0FH_SH_00PM_2_2000120104289_0001220104289_0001     de lassacter Cularly, COCCA     and the COCCA Almeter Range of Bascatter Cularly Range National Almeter Range of Bascatter Cularly Range National Cular Range SH (National Range of Bascatter Cularly Range National Cular Range SH (National Range of Bascatter Cularly Range National Cular Range SH (National Range of Bascatter Cularly Range National Cular Range SH (National Range of Bascatter Cular Range SH (National Range SH (Natio	CS_OFFL_SIR_GOPM_2_20201230T011136_20201230T012713_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
GB_0FH_SB_00PM_2_01001201016448_00001         and backster Cuship (DCO)         and backster Cuship (DCO)           GB_0FH_SB_00PM_2_01001201016488_000112010120102         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_010012010201024107_020012010104107_CU011         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_010012010201024107_020012010100110_CU001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_01001201024107_02001201020102_0010         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_010012010233148_020012010134316_0001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_01001201023348_020012001034316_0001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_0100120103348_0200120010441_0001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_01001201033348_0200120010441_0001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_0100120103344_0200120010441_0001         Cook Alimeter Facure and backster Cuship (PL)           GB_0FH_SB_00PM_2_0100120103344_0200120010441_	CS_OFFL_SIR_GOPM_2_20201230T014058_20201230T014149_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Corp. SPL Set Used and 2 2001 000 000000 20001 2000 000000 00000         Backstate Quality         For one or more records.           CS OFFL SPL SPL QUAL 2 2001 2007 02173 / 2001 2007 02115 C001         Corean Allineer Range SSL Buckstate Quality Core         and Backstate Quality Core           CS OFFL SPL SPL GOPM 2 2001 2007 02173 / 2001 2007 03173 QUOI 12007 0317 QUOI 12007 03	CS_OFFL_SIR_GOPM_2_20201230T015433_20201230T022824_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CSOFFL_SIR_00PM_2_0001230T024702_0001230T024702_0001       and Backscatter Caulty, Figs Anise be Among and Backscatter Caulty, Figs Anise be Among and Backscatter Caulty, Figs Anise be Among Among and Backscatter Caulty, Figs Among Am	CS_OFFL_SIR_GOPM_2_20201230T023508_20201230T024022_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
C20_0FTL_SR_GOPM_2_02001230T035703_20201230T035012_0011       and Backstader Quality, COCO       and Backstader Quality, CR00         C30_0FTL_SR_GOPM_2_02001230T031703_02001230T035016_0011       Amines Frage SSA, SWH and Backstader Quality Flage have be for on or nonce scots.         C30_0FTL_SR_GOPM_2_02001230T031703_02001230T034016_0011       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on or nonce scots.         C30_0FTL_SR_GOPM_2_02001230T034036_0021230T034016_0011       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on ron nonce scots.         C30_0FTL_SR_GOPM_2_02001230T034036_0021230T034016_0011       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on ron nonce scots.         C30_0FTL_SR_GOPM_2_02001230T034036_0021230T034016_0011       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on ron nonce scots.         C30_0FTL_SR_GOPM_2_02001230T044032_02001230T044032_00011       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on ron nonce scots.         C30_0FTL_SR_GOPM_2_02001230T044032_02011230T044032_0001       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on ron nonce scots.         C30_0FTL_SR_GOPM_2_02001230T04403_02001230T044032_0001       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on rone recots.         C43_0FFL_SR_GOPM_2_02001230T04403_02001230T04403_0001       Cess Athreef Trage SSA, SWH and Backstader Quality Flage have be for on rone recots.         C43_0FFL_SR_GOPM_2_02001230T04403_02001230T04403_0001       Cese Athreef Trage SSA, SWH and Backstader	CS_OFFL_SIR_GOPM_2_20201230T024707_20201230T025115_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T031782_0201230T03216_0001       and Backstanter Cuality, PCCOG       and Backstanter Cuality, PEgs have be         CS_OFFL_SIR_GOPM_2_20201230T033348_20201230T034316_0001       Ocean Alimeter Range, SSHA, SOM and Backstanter Cuality, PEgs have be         CS_OFFL_SIR_GOPM_2_20201230T034062_20201230T04074_0001       Ocean Alimeter Range, SSHA, SOM and Backstanter Cuality, PEgs have be         CS_OFFL_SIR_GOPM_2_20201230T041002_20201230T041794_0001       Ocean Alimeter Range, SSHA, SOM and Backstanter Cuality, PEgs have be         CS_OFFL_SIR_GOPM_2_20201230T041582_00201230T041592_0001       OCOG Alimeter Range Cuality, OCOG       The OCOG Alimeter Range and Backstanter Cuality FEgs have be         CS_OFFL_SIR_GOPM_2_20201230T041582_0021230T041592_0001       OCOG Alimeter Range Cuality, OCOG       The OCOG Alimeter Range and Backstanter Cuality FEgs have been factors on more records.         CS_OFFL_SIR_GOPM_2_20201230T041592_0001       OCOG Alimeter Range Cuality, OCOG       The OCOG Alimeter Range and Backstanter Cuality FEgs have been factors on more records.         CS_OFFL_SIR_GOPM_2_20201230T041592_0001       OCOG Alimeter Range, SSHA, SWH and Backstanter Cuality FEgs have been factors on more records.       The OCOG Alimeter Range and Backstanter Cuality FEgs have been factors on more records.         CS_OFFL_SIR_GOPM_2_20201230T044433_20201230T044583_0001       Ocean Alimeter Range, SSHA, SWH and Backstanter Cuality FEgs have been factors on more records.       The Ocean Alimeter Range, SSHA, SWH and Backstanter Cuality FEgs have been factors on more records.         CS_OFFL_SIR_GOPM_2_	CS_OFFL_SIR_GOPM_2_20201230T025703_20201230T030123_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS, OFFL_SIR_GOPM_2_20201230T04403_20201230T04403_C001 and Beckscatter Quality, Figs have be Mitterer Range and Beckscatter Quality Figs have be Mitterer Range and Beckscatter Quality Figs have be Mitterer Range Quality, OCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range Quality, QCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range Altimeter Range Quality, QCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range Altimeter Range Quality, QCOG Altimeter Range and Beckscatter Quality Figs have be Mitterer Range Quality, QCOG Altimeter Range Altimeter Range Altimeter Range Altimeter Range, SINA, SINH and Backscatter Quality Figs have been Backsc	CS_OFFL_SIR_GOPM_2_20201230T031738_20201230T032016_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T034602_20201230T040734_C001       and Backscatter Quality OCOG       and the COG Attimuter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T041339_20201230T041599_C001       OCCOG Attimuter Range Quality, OCOG       The OCOG Attimuter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T041517_20201230T041598_C001       OCCOG Attimuter Range Quality, OCOG       The OCOG Attimuter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T041517_20201230T044337_C001       Ocean Attimuter Range SNA, SWH and Backscatter Quality Flags have been for one or more records.       The OCOG Attimuter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T044433_20201230T044337_C001       Ocean Attimuter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.       The Ocean Attimuter Range, SSHA, SWH and Backscatter Quality Flags have been attimuter Range and Backscatter Quality Flags have been attimuter Range and Backscatter Quality Flags have been attimuter Range SSHA, SWH and Backscatter Quality Flags have been attimuter Range and Backscatter Quality Flags have been attable code Attimuter Range SSHA, SWH and Backscatter Quality Flags have been attable code Attimuter Range and Backscatter Quality Flags have been attable code Attimuter Range and Backscatter Quality Flags have been for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T033348_20201230T034316_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Construction         Backscatter Quality         for one or more records.           CS_OFFL_SIR_GOPM_2_20201230T041517_20201230T041526_C001         OCGG Altimeter Range Quality, OCGG         The OCGG Altimeter Range SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T042403_20201230T044337_C001         Ocean Altimeter Range, SHA, SWH         The OCGG Altimeter Range, SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T042403_20201230T044337_C001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T042433_20201230T044337_C001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T044433_20201230T044838_C001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH and Backscatter Quality Flag           CS_OFFL_SIR_GOPM_2_20201230T044535_20201230T044535_0001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH and Backscatter Quality Flag           CS_OFFL_SIR_GOPM_2_20201230T045635_00201230T045631_C001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T051042_0201230T051644_C001         Ocean Altimeter Range, SHA, SWH         The Ocean Altimeter Range, SHA, SWH           CS_OFFL_SIR_GOPM_2_20201230T054651_C001         Ocean Altimeter Range, SHA, SWH         The OCEA Altimeter Range and Backscatter Quality Flags have been for one or more records.           CS_OFFL_SIR_GOPM_2_20201230T056484_20201230T056450_C00	CS_OFFL_SIR_GOPM_2_20201230T034602_20201230T040734_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
OB_OPTE_SIR_GOPM_2_20201230T04203_20201230T045031_C001         Osean Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range, SNA, SWH and Backscatter Quality Fage have be and the Coco Altimeter Range and Backscatter Quality Fage have be and the Coco Altimeter Range and Backscatter Quality Fage have be and the Coco Altimeter Range and Backscatter Quality Fage have be and the Coco Altimeter Range and Backscatter Quality Fage have be and tor one or more records.	CS_OFFL_SIR_GOPM_2_20201230T041339_20201230T041509_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T04433_20201230T04433_C001       and Backscatter Quality, CCOG       and the CCOC Altimeter Range and Backscatter Quality Flags have be Altimeter Range Altimete	CS_OFFL_SIR_GOPM_2_20201230T041517_20201230T041926_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T044330201230T044330201       and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have be         CS_OFFL_SIR_GOPM_2_20201230T045355_20201230T045631_C001       Cean Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag         CS_OFFL_SIR_GOPM_2_20201230T051402_20201230T051444_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag         CS_OFFL_SIR_GOPM_2_20201230T051402_20201230T051444_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag         CS_OFFL_SIR_GOPM_2_20201230T052023_20201230T0564951_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag         CS_OFFL_SIR_GOPM_2_20201230T0564843_20201230T056409_C001       Ocean Altimeter Range Cuality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_GOPM_2_20201230T056484_20201230T055409_C001       OCCG Altimeter Range Quality, OCOG       The OCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_GOPM_2_20201230T065428_20201230T065656_C001       OCCG Altimeter Range Quality, OCOG       The OCCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_GOPM_2_20201230T06512_20201230T061740_C001       OCEA Altimeter Range Quality, OCOG       The OCCOG Altimeter Range and Backscatter Quality Flags have been         CS_OFFL_SIR_GOPM_2_20201230T06514	CS_OFFL_SIR_GOPM_2_20201230T042403_20201230T044337_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T045335_20201230T045631_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20201230T051402_20201230T051844_C001       Doean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T054643_20201230T055409_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T06512_20201230T063532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       Ocean A	CS_OFFL_SIR_GOPM_2_20201230T044433_20201230T044838_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T051402_20201230T051844_C001       and Backscatter Quality, OCGA       and the COCGA Altimeter Range and Backscatter Quality Flags have be         CS_OFFL_SIR_GOPM_2_20201230T052023_20201230T054651_C001       Ocean Altimeter Range, SSHA, SWH       The Ocean Altimeter Range and Backscatter Quality         CS_OFFL_SIR_GOPM_2_20201230T054643_20201230T055409_C001       OCCGA Altimeter Range Quality, OCCG       The OCCGA Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T055428_20201230T055656_C001       OCCGA Altimeter Range Quality, OCCG       The OCCGA Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T055428_20201230T055656_C001       OCCGA Altimeter Range Quality, OCCG       The OCCGA Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T0655428_20201230T0655428_00201230T0655428_20201230T061740_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T061220201230T063532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       Ocean Altimeter Range and Backscatter Quality. OCCG Altimeter Range and Backscatter Quality Flags have been for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T045355_20201230T045631_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T052023_20201230T054651_C001       and Backscatter Quality, COCG Altimeter Range and Backscatter Quality       and the COCG Altimeter Range and Backscatter Quality Flags have be actscatter Quality         CS_OFFL_SIR_GOPM_2_20201230T054843_20201230T055409_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T055428_20201230T055656_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065512_20201230T065656_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, Flag and the COG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T063532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.       The OCGA Altimeter Range, SSHA, SWH and the OCGA Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       OCOG Altimeter Range Quality, OCOG Altimeter Range Quality, OC	CS_OFFL_SIR_GOPM_2_20201230T051402_20201230T051844_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T054443_20201230T055428_20201230T055428_20201230T055428_20201230T055656_C001       OCOG Altimeter Range Quality       OCOG Altimeter Range Quality       OCOG Altimeter Range Quality         CS_OFFL_SIR_GOPM_2_20201230T060512_20201230T060512_20201230T060512_20201230T060512_20201230T060512_20201230T060512_20201230T060512_20201230T060512_20201230T060532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T063532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.       The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T065149_C001       Ocean Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.       The OCCG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCCG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001       OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.       The OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Qual	CS_OFFL_SIR_GOPM_2_20201230T052023_20201230T054651_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T055428_20201230T05505_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T060512_20201230T060512_20201230T061740_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flag shave be Altimeter Range, SSHA, SWH and Backscatter Quality Flag shave be Altimeter Range, SSHA, SWH and Backscatter Quality Flag shave be Altimeter Range and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flag shave be Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flag shave be Altimeter Range and Backscatter Quality, OCOG Backscatter Quality, OCOG Galtimeter Range and Backscatter Quality Flags have been Backscatter Quality         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       OCCGG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Backscatter Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T054843_20201230T055409_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T060512_20201230T061740_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have be ast for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T063532_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T055428_20201230T055656_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T063532_C001       and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality       and the OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       OCOG Altimeter Range Quality, OCOG Backscatter Quality       The OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Quality, OCOG       The Ocean Altimeter Range, SSHA, SWH and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	CS_OFFL_SIR_GOPM_2_20201230T060512_20201230T061740_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001       Backscatter Quality       for one or more records.         CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001       Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flag and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be altimeter Ran	CS_OFFL_SIR_GOPM_2_20201230T061820_20201230T063532_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001 and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have be set for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T065144_20201230T065149_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
	CS_OFFL_SIR_GOPM_2_20201230T065903_20201230T070838_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
	CS_OFFL_SIR_GOPM_2_20201230T071042_20201230T072549_C001	and Backscatter Quality, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPM_2_20201230T072811_20201230T073307_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been for one or more records.	CS_OFFL_SIR_GOPM_2_20201230T072811_20201230T073307_C001		The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_GOPM_2_20201230T074208_20201230T075427_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_GOPM_2_20201230T075908_20201230T081103_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_GOPM_2_20201230T083404_20201230T083405_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_GOPM_2_20201230T085005_20201230T090501_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_GOPM_2_20201230T090736_20201230T091221_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_GOPM_2_20201230T091911_20201230T094538_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_GOPM_2_20201230T101320_20201230T101327_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_GOPM_2_20201230T101943_20201230T104047_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_GOPM_2_20201230T104802_20201230T105137_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_GOPM_2_20201230T105828_20201230T112644_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_GOPM_2_20201230T115822_20201230T122315_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_GOPM_2_20201230T122556_20201230T123052_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_GOPM_2_20201230T123906_20201230T131235_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_GOPM_2_20201230T135743_20201230T135905_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_GOPM_2_20201230T140555_20201230T141124_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_GOPM_2_20201230T141802_20201230T145123_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_GOPM_2_20201230T150412_20201230T150550_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_GOPM_2_20201230T152342_20201230T154023_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_GOPM_2_20201230T154515_20201230T155021_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_GOPM_2_20201230T155643_20201230T163020_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_GOPM_2_20201230T165517_20201230T171758_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_GOPM_2_20201230T172733_20201230T172926_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_GOPM_2_20201230T173640_20201230T174900_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_GOPM_2_20201230T175021_20201230T175101_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_GOPM_2_20201230T175111_20201230T175346_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_GOPM_2_20201230T175827_20201230T180554_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
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CS_OFFL_SIR_GOPM_2_20201230T180556_20201230T180719_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_GOPM_2_20201230T181026_20201230T181057_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_GOPM_2_20201230T182149_20201230T182406_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_0FFL_SIR_GOPM_2_20201230T182535_20201230T184253_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_GOPM_2_20201230T184446_20201230T185905_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_GOPM_2_20201230T190633_20201230T190838_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_GOPM_2_20201230T190934_20201230T191340_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_GOPM_2_20201230T191533_20201230T192901_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_GOPM_2_20201230T193022_20201230T193053_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_GOPM_2_20201230T193254_20201230T194217_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_GOPM_2_20201230T200930_20201230T202146_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_GOPM_2_20201230T202718_20201230T203556_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_GOPM_2_20201230T203614_20201230T204058_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_GOPM_2_20201230T204432_20201230T205243_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_GOPM_2_20201230T205521_20201230T211048_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_GOPM_2_20201230T215345_20201230T222011_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_GOPM_2_20201230T222600_20201230T223119_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_GOPM_2_20201230T223433_20201230T225911_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_GOPM_2_20201230T233143_20201230T233155_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_GOPM_2_20201230T233201_20201230T235807_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_GOPN_2_20201230T015311_20201230T015433_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_GOPN_2_20201230T041926_20201230T042044_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_GOPN_2_20201230T150551_20201230T150724_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_GOPN_2_20201230T182014_20201230T182149_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_GOPN_2_20201230T231202_20201230T231230_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_GOPR_2_20201230T055843_20201230T060512_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
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CS_OFFL_SIR_GOPR_2_20201230T061740_20201230T061820_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_GOPR_2_20201230T064828_20201230T064924_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_GOPR_2_20201230T072550_20201230T072628_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_GOPR_2_20201230T073322_20201230T073327_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_GOPR_2_20201230T081837_20201230T081901_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_GOPR_2_20201230T090501_20201230T090517_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20201230T155337_20201230T155643_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_GOPR_2_20201230T175346_20201230T175827_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_GOPR_2_20201230T181300_20201230T181848_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_GOPR_2_20201230T231231_20201230T231334_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

# L2 Quality Flags (20Hz PLRM)

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

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20201230T001004_20201230T001013_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_GOPN_2_20201230T010150_20201230T010314_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_GOPN_2_20201230T012713_20201230T012811_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_GOPN_2_20201230T013751_20201230T013914_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_GOPN_2_20201230T045720_20201230T045808_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_GOPN_2_20201230T054722_20201230T054843_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_GOPN_2_20201230T055656_20201230T055843_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_GOPN_2_20201230T063745_20201230T063929_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_GOPN_2_20201230T064107_20201230T064209_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_GOPN_2_20201230T073507_20201230T073734_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_GOPN_2_20201230T075524_20201230T075543_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_GOPN_2_20201230T075543_20201230T075907_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_GOPN_2_20201230T081253_20201230T081325_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_GOPN_2_20201230T081532_20201230T081837_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20201230T090517_20201230T090736_C001	PLRM 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_GOPN_2_20201230T091412_20201230T091830_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_GOPN_2_20201230T095543_20201230T095935_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_GOPN_2_20201230T100446_20201230T100521_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_GOPN_2_20201230T101655_20201230T101943_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_GOPN_2_20201230T104531_20201230T104802_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_GOPN_2_20201230T114506_20201230T114526_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_GOPN_2_20201230T123427_20201230T123606_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_GOPN_2_20201230T134253_20201230T134432_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_GOPN_2_20201230T134448_20201230T134822_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_GOPN_2_20201230T140435_20201230T140554_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_GOPN_2_20201230T150551_20201230T150724_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_GOPN_2_20201230T151125_20201230T151237_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_GOPN_2_20201230T152123_20201230T152341_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_GOPN_2_20201230T155022_20201230T155337_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_GOPN_2_20201230T172927_20201230T173509_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
	PLRM	set for one or more records.
CS_OFFL_SIR_GOPN_2_20201230T182014_20201230T182149_C001	PLRM OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	
CS_OFFL_SIR_GOPN_2_20201230T182014_20201230T182149_C001 CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001	OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or
	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001 CS_OFFL_SIR_GOPN_2_20201230T200126_20201230T200225_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001 CS_OFFL_SIR_GOPN_2_20201230T200126_20201230T200225_C001 CS_OFFL_SIR_GOPN_2_20201230T202146_20201230T202718_C001	OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001 CS_OFFL_SIR_GOPN_2_20201230T200126_20201230T200225_C001 CS_OFFL_SIR_GOPN_2_20201230T202146_20201230T202718_C001 CS_OFFL_SIR_GOPN_2_20201230T204229_20201230T204432_C001	OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Altimeter Range Quality PLRM,         OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001 CS_OFFL_SIR_GOPN_2_20201230T200126_20201230T200225_C001 CS_OFFL_SIR_GOPN_2_20201230T202146_20201230T202718_C001 CS_OFFL_SIR_GOPN_2_20201230T204229_20201230T204432_C001 CS_OFFL_SIR_GOPN_2_20201230T213840_20201230T214429_C001	OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         Ocean Altimeter Range, SSHA, SWH         and Backscatter Quality PLRM, OCOG         Altimeter Range and Backscatter Quality	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPN_2_20201230T194217_20201230T194438_C001 CS_OFFL_SIR_GOPN_2_20201230T200126_20201230T200225_C001 CS_OFFL_SIR_GOPN_2_20201230T202146_20201230T202718_C001 CS_OFFL_SIR_GOPN_2_20201230T204229_20201230T204432_C001 CS_OFFL_SIR_GOPN_2_20201230T213840_20201230T214429_C001 CS_OFFL_SIR_GOPN_2_20201230T223119_20201230T223353_C001	OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         OCOG Altimeter Range Quality PLRM,         OCOG Altimeter Range Quality PLRM,         OCOG Altimeter Range Quality PLRM,         OCOG Backscatter Quality         Ocoan Altimeter Range, SSHA, SWH         and Backscatter Quality PLRM, OCOG         Altimeter Range and Backscatter Quality         PLRM         OCOG Altimeter Range Quality PLRM,	set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records. The OCOG Range and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_GOPR_2_20201230T000005_20201230T001004_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been
C3_0111_311_G0111_22202012301000003_202012301001004_C001	Altimeter Range and Backscatter Quality PLRM Ocean Altimeter Range, SSHA, SWH	set for one or more records.
CS_OFFL_SIR_GOPR_2_20201230T004837_20201230T005211_C001	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_GOPR_2_20201230T013232_20201230T013411_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_GOPR_2_20201230T013914_20201230T013943_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_GOPR_2_20201230T014331_20201230T015121_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_GOPR_2_20201230T024136_20201230T024450_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_GOPR_2_20201230T032016_20201230T032257_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_GOPR_2_20201230T032307_20201230T033348_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_GOPR_2_20201230T040734_20201230T040914_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_GOPR_2_20201230T041510_20201230T041516_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_GOPR_2_20201230T042044_20201230T042403_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_GOPR_2_20201230T050303_20201230T051037_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_GOPR_2_20201230T051141_20201230T051304_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_GOPR_2_20201230T051323_20201230T051350_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_GOPR_2_20201230T055843_20201230T060512_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_GOPR_2_20201230T064209_20201230T064737_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_GOPR_2_20201230T064828_20201230T064924_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_GOPR_2_20201230T065259_20201230T065358_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_GOPR_2_20201230T073734_20201230T074009_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_GOPR_2_20201230T081103_20201230T081218_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_GOPR_2_20201230T081405_20201230T081532_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_GOPR_2_20201230T082112_20201230T082805_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_GOPR_2_20201230T084149_20201230T085005_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_GOPR_2_20201230T095310_20201230T095322_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_GOPR_2_20201230T095936_20201230T100446_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_GOPR_2_20201230T100521_20201230T100653_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_GOPR_2_20201230T105709_20201230T105827_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_GOPR_2_20201230T113709_20201230T114506_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_GOPR_2_20201230T123607_20201230T123906_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_GOPR_2_20201230T131403_20201230T131429_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_GOPR_2_20201230T131542_20201230T132313_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_GOPR_2_20201230T132701_20201230T132839_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_GOPR_2_20201230T133224_20201230T133415_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_GOPR_2_20201230T140123_20201230T140435_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_GOPR_2_20201230T145124_20201230T150113_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_GOPR_2_20201230T150749_20201230T151014_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_GOPR_2_20201230T163020_20201230T163203_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_GOPR_2_20201230T163320_20201230T164012_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_GOPR_2_20201230T171758_20201230T172456_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_GOPR_2_20201230T173509_20201230T173640_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Attimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Attimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_GOPR_2_20201230T180719_20201230T180811_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_GOPR_2_20201230T180814_20201230T180938_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_GOPR_2_20201230T180940_20201230T180958_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_GOPR_2_20201230T181300_20201230T181848_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_GOPR_2_20201230T181848_20201230T182014_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_GOPR_2_20201230T184253_20201230T184446_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_GOPR_2_20201230T190127_20201230T190325_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_GOPR_2_20201230T193053_20201230T193238_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_GOPR_2_20201230T193242_20201230T193254_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_GOPR_2_20201230T195619_20201230T195925_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_GOPR_2_20201230T200436_20201230T200810_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_GOPR_2_20201230T200828_20201230T200930_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_GOPR_2_20201230T213310_20201230T213840_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_GOPR_2_20201230T214429_20201230T214706_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_GOPR_2_20201230T230953_20201230T231202_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_GOPR_2_20201230T231357_20201230T231858_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_GOPR_2_20201230T235807_20201231T000122_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.				
L2 Quality Flags (1 Hz & 1Hz PLRM)						
Currently, there are several common flags raised in the Level 2 products, wi	Currently, there are several common flags raised in the Level 2 products, which are summarised below.					

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

199

62

157

Number of products with errors:

### 5.8 L2 Ocean Retracking Quality Check

#### L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

#### L2 Retracking Flags (20Hz, PLRM)

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

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

Number of products with errors:

### 6. GOP 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 Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.

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

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

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Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20201229T231710_20201230T000648_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_GOP_220201230T000648_20201230T005625_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_2_20201230T005625_20201230T014602_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) for one or more records
CS_OFFL_SIR_GOP_2_20201230T014602_20201230T023540_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) for one or more records
CS_OFFL_SIR_GOP_2_20201230T023540_20201230T032517_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) for one or more records
CS_OFFL_SIR_GOP_2_20201230T032517_20201230T041454_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) for one or more records

	1	
CS_OFFL_SIR_GOP_220201230T041454_20201230T050432_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) for one or more records
CS_OFFL_SIR_GOP_220201230T050432_20201230T055409_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) for one or more records
CS_OFFL_SIR_GOP_220201230T055409_20201230T064346_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220201230T064346_20201230T073323_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) for one or more records
CS_OFFL_SIR_GOP_220201230T073323_20201230T082301_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) for one or more records
CS_OFFL_SIR_GOP_220201230T082301_20201230T091238_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) for one or more records
CS_OFFL_SIR_GOP_220201230T091238_20201230T100216_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) for one or more records
CS_OFFL_SIR_GOP_220201230T100216_20201230T105153_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) for one or more records
CS_OFFL_SIR_GOP_220201230T105153_20201230T114131_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) for one or more records
CS_OFFL_SIR_GOP_220201230T114131_20201230T123108_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) for one or more records
CS_OFFL_SIR_GOP_220201230T123108_20201230T132045_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) for one or more records
CS_OFFL_SIR_GOP_220201230T132045_20201230T141022_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) for one or more records
CS_OFFL_SIR_GOP_220201230T141022_20201230T150000_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) for one or more records
CS_OFFL_SIR_GOP_220201230T150000_20201230T154937_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) for one or more records
CS_OFFL_SIR_GOP_220201230T154937_20201230T163914_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_GOP_220201230T163914_20201230T172852_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) for one or more records
CS_OFFL_SIR_GOP_220201230T172852_20201230T181829_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) for one or more records
CS_OFFL_SIR_GOP_220201230T181829_20201230T190806_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) for one or more records
CS_OFFL_SIR_GOP_220201230T190806_20201230T195744_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) for one or more records
CS_OFFL_SIR_GOP_220201230T195744_20201230T204721_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) for one or more records
CS_OFFL_SIR_GOP_220201230T204721_20201230T213659_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) for one or more records
CS_OFFL_SIR_GOP_220201230T213659_20201230T222636_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOP_220201230T222636_20201230T231613_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) for one or more records
CS_OFFL_SIR_GOP_220201230T231613_20201231T000550_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) for one or more records

# 6.5 P2P Measurement Confidence Data Check

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

0

6.6 P2P Measurement Quality Flag Check							
P2P Quality Flags (20Hz)							
CryoSat P2P data includes Quality Flags for each	20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.						
Since the P2P Quality Flags are copied directly	r from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.						
Number of products with errors:	29						
P2P Quality Flags (20Hz PLRM)							
Since the P2P Quality Flags are copied directly	r from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.						
Number of products with errors:	28						
P2P Quality Flags (1 Hz & 1Hz PLRM							
Since the P2P Quality Flags are copied directly	r 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 Retrackin	g Quality Check
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### P2P Retracking Flags (20Hz)

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

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

27

30

#### Number of products with errors:

#### P2P Retracking Flags PLRM

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

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

Number of products with errors:

### 7. GOP 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_GOPM1B	208	208	4	204	0
SIR_GOPR1B	138	138	0	138	0
SIR_GOPN1B	98	98	4	94	0
SIR_GOPM_2	208	208	156	52	0
SIR_GOPR_2	138	138	48	83	7
SIR_GOPN_2	98	98	38	60	0
SIR_GOP_P2P	29	29	0	24	5

### 7.1 QCC Errors

#### Number of QCC reports with errors:

12 Total number of occurrences of each error 

Product Type	REOBOPNEDF	RL	RL	RLOBOPNEDF	RL	RL	-	-	-	-	-
SIR_GOPR_2	7	3	7	7	3	7					
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR GOP 2	F	F	5	F							

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

### 7.2 QCC Warnings

Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPL
SIR GOPM1B	204	0	0	0	0	0	0
SIR GOPM 2	0	0	39	40	0	38	0
SIR GOPN1B	93	0	0	0	0	0	0
SIR GOPN 2	0	0	6	27	4	21	21
SIR_GOPR1B	133	0	0	0	0	0	0
SIR GOPR 2	0	7	38	52	0	33	25
							-
Product Type	RBSZOPOEPNCDF	RDACONCDF	RLPTONCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARN	CERPEPOPFDPLRMSI
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	34	0	0	0	33	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	15	1	4	1	0	0	22
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	7	0	0	1	0	60	0
	RPEPOPFDSARNCDF	RPEPOPFDSINNCDF	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF
Product Type		0	0	RPEPOPSARNODP	0	0	0
SIR_GOPM1B	0	0	25	0	0	6	27
SIR_GOPM_2		0	0	0	0	0	0
SIR_GOPN1B	0		0	0	26	19	46
SIR_GOPN_2		28		0			46
SIR_GOPR1B	0	0	0	0	0	0	
SIR_GOPR_2	66	0	0	58	0	2	69
Product Type	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF
SIR GOPM1B	0	0	0	0	0	0	0
SIR GOPM 2	0	2	37	0	2	0	0
SIR GOPN1B	0	0	0	0	0	0	46
SIR GOPN 2	50	28	23	23	12	1	0
SIR GOPR1B	0	0	0	0	0	0	138
SIR GOPR 2	45	16	33	53	1	13	0
							-
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMN	CERBSZOPOEPNCDF
SIR_GOP_2_	17	27	29	4	29	15	27
Product Type	RDACONCDF	RLPTONCDF	RNELPOTONCDF	RPEPOPFDPLRMSINNCD		RPEPOPSINNCDF	RSSBCONCDF
SIR_GOP_2_	1	4	2	15	28	24	18
Product Type	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF
SIR GOP 2	29	19	26	29	18	11	29
			•		•	·	·
Description Key							
eviation	Test name			Details	a ana hishasudh sansad ta di	a manifesta humak antonén	
INCDF	BurstCounterStep20HzNet	IGDF		The purst counter should be	e one higher with regard to th	le previous purst counter	
	IndexOf1Hzin20HzMappingOutOfRange			The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)			

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
RDACONCDF	RangeDynamicAtmosphericCorrectionOceanNetCDF	The Dynamic atmospheric correction should be between -1050mm and 1000mm (or missing) for surface type =
RLPTONCDF	RangeLongPeriodTideOceanNetCDF	The Long period tide height should be between -50mm and 50mm (or missing) for surface type = ocean
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter
SCSTODNCDF	SequenceCounterStepTODNetCDF	The sequence counter should be one higher (modulo 16384) with regard to the previous sequence counter

# 7.3 Missing QCC Reports

Number of products with missing QCC reports:

0