

QA4EO Daily Report for GOP data:

<u>05/08/2022</u>

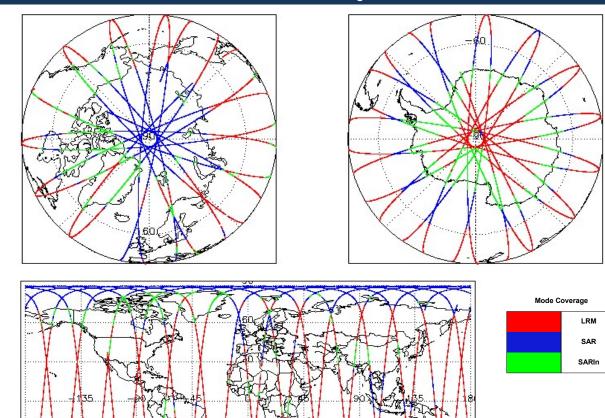
IDEAS-QA4E0

Report Production:	05-Sep-2022	Check	L1 & L2	P2P
report Production.	03-360-2022	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.	CryoSat Ocean Processor	Product Software Check	Nominal	Nominal
Data Used:	Geophysical Ocean Products (GOP) L1B, L2 & P2P Science Data	Product Format Check	Nominal	Nominal
		Product Header Analysis	Nominal	Nominal
		Auxiliary Data File Usage Check	Nominal	Nominal
		Auxiliary Correction Error Check	See Section 5.4	See Section 6.4
		Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5	See Section 6.5
		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, 7.2 and 7.3

05-Aug-2022	None

06-Aug-2022 Nothing planned

2. Global Coverage



3. Instrument Configuration

SIRAL instrument(s) in use:

SIRAL - A

0

4. GOP Level 1B Data Quality Check

4.1 L1B Product Format Check

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

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

4.2 L1B Product Header Analysis

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

L1B Processing Quality HR: The I1b_proc_flag_hr flag is currently set all L1B GOPR and GOPN products because the I1b_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:

4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

4.4 L1B Auxiliary Correction Error Check

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

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Number of products with errors:

4.5 L1B Measurement Confidence Data Check

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

Attitude Correction Missing: This flag is currently set in error for GOPR products due to a configuration issue. This is being investigated and will be updated in the next SW update.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20220805T041118_20220805T044336_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20220805T161721_20220805T162322_C001		There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20220805T175419_20220805T175912_C001		There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20220805T181402_20220805T181443_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_GOPM1B_20220805T211444_20220805T211554_C001		There is an error in the scaling of the L1B waveform for one or more records

4.6 L1B Waveform Group Data Check

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

Loss of Echo Flag: This flag is currently set for some products over land, but this is to be expected.

16

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM1B_20220805T014700_20220805T015928_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20220805T020132_20220805T021626_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPM1B_20220805T140655_20220805T142155_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T030610_20220805T030907_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T031001_20220805T031213_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T131117_20220805T131529_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T131533_20220805T131535_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T145019_20220805T145129_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPN1B_20220805T211020_20220805T211212_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20220805T031214_20220805T031910_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20220805T144608_20220805T145019_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20220805T190341_20220805T190530_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20220805T210945_20220805T211019_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_GOPR1B_20220805T211554_20220805T211905_C001	Loss of Echo	The tracking echo is missing for one or more records

5. GOP Level 2 Data Quality Check

5.1 L2 Product Format Check

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

Number of products with errors:

5.2 L2 Product Header Analysis

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

Number of products with errors:

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

5.4 L2 Auxiliary Correction Error Check

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

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

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

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

Number of	products	with	errors:

Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20220805T044559_20220805T044643_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPM_2_20220805T061511_20220805T061742_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_20220805T145542_20220805T151240_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPM_2_20220805T163810_20220805T164747_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_20220805T182239_20220805T184925_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_20220805T004813_20220805T004957_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_20220805T013204_20220805T013258_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_20220805T022609_20220805T022827_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_20220805T030610_20220805T030907_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide heigh (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20220805T031001_20220805T031213_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide heigh (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20220805T035622_20220805T035817_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_20220805T040506_20220805T040945_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_20220805T044644_20220805T045037_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_20220805T053633_20220805T053904_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_20220805T054627_20220805T054810_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_20220805T085533_20220805T085647_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_20220805T090426_20220805T090541_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_20220805T103448_20220805T103610_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_20220805T104120_20220805T104429_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_GOPN_2_20220805T121538_20220805T121821_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_20220805T122024_20220805T122553_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_20220805T131117_20220805T131529_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_20220805T135458_20220805T135734_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_20220805T140437_20220805T140616_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_20220805T145019_20220805T145129_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_20220805T145244_20220805T145429_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_GOPN_2_20220805T162938_20220805T163442_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_20220805T171225_20220805T171414_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_20220805T172229_20220805T172451_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

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CS_OFFL_SIR_GOPN_2_20220805T180945_20220805T181401_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_20220805T203201_20220805T203536_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_20220805T221120_20220805T221440_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_20220805T221953_20220805T222117_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_20220805T230206_20220805T230322_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_20220805T235857_20220806T000005_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_20220805T013258_20220805T013839_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_20220805T031214_20220805T031910_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_20220805T045038_20220805T045556_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_20220805T045629_20220805T045738_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_20220805T062851_20220805T063622_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_20220805T080633_20220805T081408_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_20220805T082326_20220805T082524_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_20220805T094522_20220805T095213_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_20220805T095214_20220805T095336_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_20220805T112357_20220805T113112_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_20220805T113112_20220805T113354_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_20220805T130548_20220805T131006_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_20220805T131007_20220805T131116_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_20220805T144336_20220805T144608_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_20220805T144608_20220805T145019_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_20220805T162323_20220805T162938_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_20220805T180502_20220805T180944_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_20220805T194241_20220805T195146_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_20220805T212254_20220805T213044_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_20220805T230322_20220805T231112_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.

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Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20220805T041118_20220805T044336_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20220805T161721_20220805T162322_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20220805T175419_20220805T175911_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20220805T181402_20220805T181443_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOPM_2_20220805T211444_20220805T211554_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

5.6 L2 Measurement Quality Flag Check

L2 Quality Flags (20 Hz)

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

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

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

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

79

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Product	Test Failed	Description
CS_OFFL_SIR_GOPM_2_20220805T000151_20220805T003703_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_20220805T003950_20220805T004507_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_20220805T005609_20220805T012619_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_20220805T014700_20220805T015928_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_20220805T020132_20220805T021626_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_20220805T021904_20220805T022406_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_20220805T022445_20220805T022608_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_20220805T023328_20220805T024346_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_20220805T025006_20220805T030458_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_20220805T033711_20220805T033953_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_20220805T034132_20220805T035503_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_20220805T035817_20220805T040317_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_20220805T041118_20220805T044336_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_20220805T051132_20220805T053342_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_20220805T053904_20220805T054235_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_20220805T054258_20220805T054626_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_20220805T054948_20220805T061508_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_20220805T061511_20220805T061742_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_20220805T064754_20220805T071349_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_20220805T072941_20220805T080306_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_20220805T081526_20220805T082208_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_20220805T082627_20220805T083542_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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	Ocean Altimeter Range, SSHA, SWH	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_GOPM_2_20220805T084837_20220805T085257_C001	and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range, Sorra, Swiri and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_GOPM_2_20220805T085647_20220805T090223_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_20220805T090950_20220805T094229_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_20220805T095443_20220805T095627_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_20220805T101454_20220805T103054_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_20220805T103610_20220805T104119_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_20220805T104812_20220805T112356_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_20220805T113446_20220805T113541_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_20220805T114556_20220805T115017_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_20220805T115113_20220805T120850_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_20220805T121822_20220805T122023_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_20220805T122758_20220805T124312_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_20220805T124440_20220805T124647_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_20220805T124925_20220805T130354_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_20220805T131613_20220805T133424_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_20220805T133739_20220805T134928_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_20220805T140046_20220805T140436_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_20220805T140655_20220805T142155_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_20220805T142357_20220805T143320_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_20220805T145129_20220805T145243_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_20220805T145542_20220805T151240_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_20220805T152831_20220805T153036_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_20220805T153543_20220805T154339_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_20220805T154636_20220805T160102_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_20220805T163810_20220805T164747_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_20220805T164757_20220805T171043_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

Company Company Alexander Range, Silver, Silve	CS_OFFL_SIR_GOPM_2_20220805T171648_20220805T172228_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CB, PHL, SHL COMP, 2, 0020481714289, 20204817142482, 001 and Description Duals, DUCD Alternative profile to the construction of the construc	CS_OFFL_SIR_GOPM_2_20220805T172637_20220805T175026_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Operation Reduction Reduction Reduction Reduction 00_071_011_010000_20000110000_0001 Code Allower frage, Stop, Stop, Code Allower frage and Research Cadely Frage trees have all Research Cadely Frage trees have alll	CS_OFFL_SIR_GOPM_2_20220805T182239_20220805T184925_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
B2_0FR_JRE_DON_2_R22005110058_02000 and backstate Guilty COD Attempt Regs Bible Store B3_0FR_JRE_DON_2_R220055110058_0200000110058 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R220055110058_0200000110058 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R020055110058_0200000110058 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R020055110058_0200000110058 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R020055110058_0200000110059 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R020055110058_02000001120050 Com Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R0200551120052_020000120050 Code Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R0200551120052_020000120050 Code Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R0200551120052_020000120050 Code Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R0200551120052_0001120050_0001 Code Attempt Regs Bible Store The Open Attempt Regs Bible Store B3_0FR_JRE_DON_2_R0200551120052_0001120050_0001 Code Attempt Regs Bible Store The Open Attempt Regs Bible Store	CS_OFFL_SIR_GOPM_2_20220805T185625_20220805T190056_C001		
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CH_0FH_JB_00FH_JD000000000000000000000000000000000000	CS_OFFL_SIR_GOPM_2_20220805T193639_20220805T194241_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Col DFL SIN: COVIL 2.10228007120358. J2220007120459, 20220807120559. Colora Altimeter Rang, SINA, SWH, and Statistic Cultury Flags and Statis Cultury Flags and Statistic Cultury Flags and Statisti	CS_OFFL_SIR_GOPM_2_20220805T195614_20220805T202741_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB. OFFL SIR GOPM 2 2022005T224650, 2022005T226552, 2022005T226552, 2022005T225554, 2022005T225554, 2022005T225557, 2011 DCCCC Attractor Range Outlity, COCC Attractor Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function on row Rooten Range and Backscatter Quality Flags have been and function Range ABAC State Range A	CS_OFFL_SIR_GOPM_2_20220805T203536_20220805T204110_C001		
OpenL_SH_QUPL_SLOAD Bedscatter Quality For one or more records CS_OFFL_SIR_GOPM_2_20220805T21200_20220805T21220_001 Coen Altmeter Range, SSHA, SWH Range and Backsatter Quality The Ocean Altmeter Range and Backsatter Guality Fage have been at the one or more records CS_OFFL_SIR_GOPM_2_20220805T21200_20220805T21200_001 Coen Altmeter Range, SSHA, SWH Range and Backsatter Quality The Ocean Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsatter Quality The OCEAN Altmeter Range, SSHA, SWH and Backsater Quality The OCEAN Altmeter Range, S	CS_OFFL_SIR_GOPM_2_20220805T204430_20220805T204856_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CB_OFFL_SIR_GOPM_2_80228807121207_020208071212345 and Backscatter Quality marge and Backscatter Quality CB_OFFL_SIR_GOPM_2_802288071213455_020208057120145_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow nome records. CB_OFFL_SIR_GOPM_2_802288057221440_00208857221492_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow nome records. CB_OFFL_SIR_GOPM_2_80228805722140_00208057221492_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_80228805722582_00208057221492_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_80228805722583_0220805722587_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_802288057225857_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_80228805723554_0220805723554_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_80220805723554_00208057235451_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_80220805723554_00208057235451_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set for ow or more records. CB_OFFL_SIR_GOPM_2_802208057235451_00020857235451_0001 Coron Ahmeter Range, SSHA, SVH and Backscatter Quality Flags have been set f	CS_OFFL_SIR_GOPM_2_20220805T205954_20220805T210638_C001		
CB_DFFL_SIR_GOPM_2_20220805T23145_0220805T22146_02001 and Backscatter Quality. COCG Altimeter Range and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T22140_02220805T22140_02020805T22140_02020805T22140_02020805T22140_02020805T22140_02020805T22140_0000 CocG Altimeter Range Quality. COCG Altimeter Range and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T22504_20220805T224137_C001 Cocan Altimeter Range, SHA, SWH and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T225933_20220805T224137_C001 Cocan Altimeter Range, SHA, SWH and Backscatter Quality. Flags and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T225933_20220805T225937_C001 Cocan Altimeter Range, SHA, SWH and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T23545_20220805T23445_C001 Cocan Altimeter Range, SHA, SWH and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T23554_20220805T235451_C001 Cocan Altimeter Range Caulity. COCG Altimeter Range and Backscatter Quality. Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T235462_C001 Cocan Altimeter Range Quality. COCG CS_OFFL_SIR_GOPM_2_20220805T235462_20220805T235462_C001 COCG Altimeter Range Quality. COCG CS_OFFL_SIR_GOPM_2_20220805T035469_C001 COCG Altimeter Range Quality. COCG CS_	CS_OFFL_SIR_GOPM_2_20220805T212007_20220805T212230_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
Column 2, 0020001 2, 0020001 22182,0001 Backstatter Quality For one or more records CS_OFFL_SIR_GOPM_2, 20220805122504, 202208051224137_C001 Cean Altimeter Range, SSHA, SWH and Backstatter Quality, COG Altimeter Range, SSHA, SWH and Backstatter Quality Flags have been and to COG Altimeter Range, SSHA, SWH and Backstatter Quality, Flags have been and to COG Altimeter Range, SSHA, SWH and Backstatter Quality, Flags have been and to core name records CS_OFFL_SIR_GOPM_2, 20220805723545, 20220805723645, C001 Cean Altimeter Range, SSHA, SWH and Backstatter Quality, Flags and backstatter Quality, COG Altimeter Range, SSHA, SWH and Backstatter Quality, COG Altimeter Range, SSHA, SWH and Backstatter Quality, COG Altimeter Range, SSHA, SWH and Backstatter Quality, COG Altimeter Range, SSHA, SWH and Backstatter Quality, Flags have been set for one or more records CS_OFFL_SIR_GOPM_2, 202208057235407,0001 CCCG Altimeter Range Quality, COG Blockstatter Quality, Flags have been set for one or more records CS_OFFL_SIR_GOPM_2, 202208057235467, 202208057235440_C001 CCCG Altimeter Range Quality, COCG Blockstatter Quality, Flags have been set for one or more records CS_OFFL_SIR_GOPM_2, 202208057023677, 202208057023877, 0001 CCCG Altimeter Range Quality, COCG Blockstatter Quality, COCG Blockstatter Quality, COCG Altimeter Range and Backstatter Quality, Flags have been set for one or mon	CS_OFFL_SIR_GOPM_2_20220805T213455_20220805T220745_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20220805T225803_20220805T225807_001 and Backscatter Quality, COG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T225803_20220805T225807_001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T2351112_0220805T235445_001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T235145_001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T23545_20220805T23463_001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T23545_20220805T234631_C001 Ocean Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T235457_20220805T235450_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T235457_20220805T235450_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T235457_20220805T023849_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T023805_003949_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T022805_003949_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T022805_003949_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T022805_003949_0001 OCOG Altimeter Range Quality, OCOG CS_OFFL_SIR_GOPM_2_20220805T02	CS_OFFL_SIR_GOPM_2_20220805T221440_20220805T221952_C001		
CS_OFFL_SIR_GOPM_2_20220805T22583_20220805T225847_001 and Backscatter Quality rand Backscatter Quality <td>CS_OFFL_SIR_GOPM_2_20220805T222504_20220805T224137_C001</td> <td>and Backscatter Quality, OCOG Altimeter</td> <td>and the OCOG Altimeter Range and Backscatter Quality Flags have been</td>	CS_OFFL_SIR_GOPM_2_20220805T222504_20220805T224137_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20220805T231112_20220805T233445_C001 and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and Backscatter Quality, OCCG Altimeter Range, SSHA, SWH and Backscatter Quality, OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and the OCCG Altimeter Range and Backscatter Quality Flags have been and Back	CS_OFFL_SIR_GOPM_2_20220805T225933_20220805T225957_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPM_2_20220805T233554_20220805T234631_C001 and Backscatter Quality. OCOG Altimeter and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T235139_20220805T235440_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T235457_20220805T235456_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T033816_20220805T003949_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T022609_20220805T022827_C001 OCOG Altimeter Range SHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T050727_20220805T051055_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, Flags have been set for one or more records CS_OFFL_SIR_GOPM_2_20220805T072526_20220805T072700_C001 OC	CS_OFFL_SIR_GOPM_2_20220805T231112_20220805T233445_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPN_2_202208051235457_20220805T235856_C001 Backscatter Quality for one or more records CS_OFFL_SIR_GOPN_2_20220805T235457_20220805T235856_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T033816_20220805T003949_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001 OCean Altimeter Range, SSHA, SWH The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T05727_20220805T051055_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Backscatter Quality COG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T0161428_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Decean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20220805T233554_20220805T234631_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPN_2_20220805T003816_20220805T003949_C001 Backscatter Quality CCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS_OFFL_SIR_GOPN_2_20220805T02809_20220805T022807_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T050727_20220805T051055_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001	CS_OFFL_SIR_GOPM_2_20220805T235139_20220805T235440_C001		
CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001 Backscatter Quality The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T050727_20220805T051055_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, CCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T050727_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCCG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPM_2_20220805T235457_20220805T235856_C001		
CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001 and Backscatter Quality, OCOG Altimeter Range and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T050727_20220805T051055_C001 OCOG Altimeter Range Quality, OCOG Backscatter Quality, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161428_C001 OCCOG Altimeter Range Quality, OCOG Backscatter Quality, O	CS_OFFL_SIR_GOPN_2_20220805T003816_20220805T003949_C001		
CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001 Backscatter Quality for one or more records CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001 OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set Range and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPN_2_20220805T022609_20220805T022827_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T16324256_C001 Backscatter Quality for one or more records CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCCG Altimeter Range Quality, OCOG Backscatter Quality The OCCG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_GOPN_2_20220805T050727_20220805T051055_C001		
CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001 and Backscatter Quality, OCOG Altimeter Range and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001 OCOG Altimeter Range Quality, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set and Backscatter Quality, OCOG Altimeter Range, and Backscatter Quality, Flags have been set for one or more records	CS_OFFL_SIR_GOPN_2_20220805T054252_20220805T054258_C001		
CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Backscatter Quality for one or more records CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG Altimeter and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPN_2_20220805T072526_20220805T072700_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001 and Backscatter Quality, OCOG Altimeter and the OCOG Altimeter Range and Backscatter Quality Flags have been	CS_OFFL_SIR_GOPN_2_20220805T161035_20220805T161428_C001		
	CS_OFFL_SIR_GOPN_2_20220805T163445_20220805T163526_C001	and Backscatter Quality, OCOG Altimeter	and the OCOG Altimeter Range and Backscatter Quality Flags have been

CS_OFFL_SIR_GOPN_2_20220805T211909_20220805T212007_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_20220805T212231_20220805T212253_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_20220805T004957_20220805T005609_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_20220805T035504_20220805T035622_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_20220805T144336_20220805T144608_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (20 Hz PLRM)

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

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

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

77

Product	Test Failed	Description
CS_OFFL_SIR_GOPN_2_20220805T003816_20220805T003949_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_20220805T030610_20220805T030907_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_20220805T040506_20220805T040945_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_20220805T050727_20220805T051055_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_20220805T053633_20220805T053904_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_20220805T063935_20220805T064016_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_20220805T071516_20220805T071647_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_20220805T072526_20220805T072700_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_20220805T081408_20220805T081433_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_20220805T083542_20220805T083916_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_20220805T085533_20220805T085647_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_20220805T090426_20220805T090541_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_20220805T101340_20220805T101454_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_20220805T103448_20220805T103610_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_20220805T121538_20220805T121821_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_20220805T122024_20220805T122553_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_20220805T131117_20220805T131529_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_20220805T145019_20220805T145129_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_20220805T145244_20220805T145429_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_20220805T151241_20220805T151843_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_20220805T161035_20220805T161428_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_20220805T162938_20220805T163442_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_20220805T163445_20220805T163526_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_20220805T171625_20220805T171648_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_20220805T172229_20220805T172451_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_20220805T175026_20220805T175141_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_20220805T175212_20220805T175419_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_20220805T180428_20220805T180502_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_20220805T181444_20220805T181606_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_20220805T185157_20220805T185337_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_20220805T195146_20220805T195614_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_20220805T203201_20220805T203536_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_20220805T205841_20220805T205954_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_20220805T211020_20220805T211212_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_20220805T213045_20220805T213224_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_20220805T221120_20220805T221440_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_20220805T224137_20220805T224455_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_20220805T003703_20220805T003816_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_20220805T004508_20220805T004513_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_20220805T004957_20220805T005609_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_20220805T013921_20220805T014019_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_20220805T015942_20220805T020132_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_20220805T021627_20220805T021721_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_20220805T022827_20220805T023328_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_20220805T024754_20220805T024811_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_20220805T024811_20220805T025006_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_20220805T031214_20220805T031910_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_20220805T033246_20220805T033710_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_20220805T033954_20220805T034132_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_20220805T045629_20220805T045738_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_20220805T053342_20220805T053633_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_20220805T062851_20220805T063622_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_20220805T063622_20220805T063851_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_20220805T090542_20220805T090949_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_20220805T095743_20220805T100102_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_20220805T100358_20220805T100402_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_20220805T103054_20220805T103448_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_20220805T112357_20220805T113112_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_20220805T113112_20220805T113354_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_20220805T120850_20220805T121538_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_20220805T122553_20220805T122758_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_20220805T130355_20220805T130517_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_20220805T130548_20220805T131006_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_20220805T133425_20220805T133539_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_20220805T134928_20220805T135458_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_20220805T140617_20220805T140654_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_20220805T160239_20220805T160917_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_20220805T171043_20220805T171225_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_20220805T180055_20220805T180314_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_20220805T184925_20220805T185156_C001	Ocean Attimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Attimeter 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_20220805T202741_20220805T203201_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_20220805T212254_20220805T213044_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_20220805T213245_20220805T213327_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_20220805T220746_20220805T221120_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_20220805T222118_20220805T222504_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_20220805T225202_20220805T225506_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_20220805T225507_20220805T225933_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

L2 Quality Flags (1 Hz & 1 Hz PLRM)

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

192

65

148

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

Number of products with errors:

5.8 L2 Ocean Retracking Quality Check

L2 Retracking Flags (20 Hz)

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

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

Number of products with errors:

L2 Retracking Flags (20 Hz PLRM)

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

Ocean Retracking Quality Flag (PLRM): This flag is currently set for products 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: 0

6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

6.4 P2P Auxiliary Correction Error Check

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

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

29

Product	Test Failed	Description
CS_OFFL_SIR_GOP_2_20220805T004508_20220805T013445_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_20220805T013445_20220805T022422_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
		There is an error with the MSS height (solution 1), the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records

	1	
CS_OFFL_SIR_GOP_2_20220805T031359_20220805T040337_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_20220805T040337_20220805T045314_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography 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_20220805T045314_20220805T054252_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_20220805T054252_20220805T063229_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_20220805T063229_20220805T072207_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_20220805T072207_20220805T081144_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_20220805T081144_20220805T090121_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_20220805T090121_20220805T095058_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_20220805T095058_20220805T104036_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_220220805T104036_20220805T113013_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography 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_20220805T113013_20220805T121951_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_20220805T121951_20220805T130928_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_20220805T130928_20220805T135905_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_20220805T135905_20220805T144842_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_20220805T144842_20220805T153820_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography 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_20220805T153820_20220805T162757_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_20220805T162757_20220805T171735_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_20220805T171735_20220805T180712_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_20220805T180712_20220805T185650_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_20220805T185650_20220805T194627_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_20220805T194627_20220805T203604_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_20220805T203604_20220805T212541_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_20220805T212541_20220805T221519_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_220220805T221519_20220805T230456_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_20220805T230456_20220805T235434_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_2_20220805T235434_20220806T004411_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
6 5 P2P Maggurament Confidence Data Check		

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.

5

Product	Test Failed	Description
CS_OFFL_SIR_GOP_220220805T040337_20220805T045314_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220220805T153820_20220805T162757_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220220805T171735_20220805T180712_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_GOP_220220805T180712_20220805T185650_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

6.6 P2P Measurement Quality	Flag Check
P2P Quality Flags (20 Hz)	
CryoSat P2P data includes Quality Flags for e	each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	30
P2P Quality Flags (20 Hz PLRM)	
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	29
P2P Quality Flags (1 Hz & 1 Hz PL	RM)
Since the P2P Quality Flags are copied dire	ectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	30
6.8 P2P Ocean Retracking Qua	lity Check
P2P Retracking Flags (20 Hz)	
Cryosat P2P data includes an ocean retrackin	g 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): Thi	s flag is currently set for products GOPR and GOPN products over sea ice, but this is to be expected.
Number of products with errors:	29
P2P Retracking Flags PLRM	
CryoSat L2 data includes an ocean retracking	quality flag for each 20 Hz PLRM measurement record. The bit value of this flag indicates any problems when set.

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

30

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	149	149	5	144	0
SIR_GOPR1B	105	105	0	105	0
SIR_GOPN1B	104	104	6	98	0
SIR_GOPM_2	149	149	99	50	0
SIR_GOPR_2	105	105	30	74	1
SIR_GOPN_2	104	104	40	64	0
SIR_GOP_P2P	29	29	0	28	1

7.1 QCC Errors

Number of QCC	reports with er	rors:	2								
			Total number of occurrences of each error								
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_GOPR_2	1	1	1	1							
Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_GOP_2_	1	1	1	1							

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

7.2 QCC Warnings

Number of QCC reports with warnings 2181

Total number of occurrences of each warning

	Total number of occurrences of each warning						
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCE
SIR_GOPM1B	144	0	0	0	0	0	0
SIR_GOPM_2	0	0	45	43	2	37	0
SIR_GOPN1B	97	0	0	0	0	0	0
SIR_GOPN_2	0	0	9	30	4	30	31
SIR_GOPR1B	103	0	0	0	0	0	0
SIR_GOPR_2	0	1	48	46	0	38	32
Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC		RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	31	0	36	0	0	0	0
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	23	1	0	0	20	0	30
SIR_GOPR1B	0	0	0	0	0	0	0
SIR_GOPR_2	20	0	0	49	0	57	0
Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_GOPM1B	0	0	0	0	0	0	0
SIR_GOPM_2	30	0	0	5	33	0	8
SIR_GOPN1B	0	0	0	0	0	0	0
SIR_GOPN_2	0	0	23	20	46	49	35
SIR_GOPR1B	0	0	0	0	0	0	0
SIR GOPR 2	0	50	0	1	67	41	4

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_GOPM1B	0	0	0	0	0	0	
SIR_GOPM_2	37	0	5	0	0	0	
SIR_GOPN1B	0	0	0	0	46	1	
SIR_GOPN_2	27	26	13	4	0	0	
SIR_GOPR1B	0	0	0	0	105	3	
SIR_GOPR_2	38	55	3	1	0	0	
Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
SIR_GOP_2_	13	29	29	4	29	17	29
Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCD	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_GOP_2_	1	17	29	20	20	29	17
Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	•	•
SIR GOP 2	23	29	18	16	29		

Test Description Key:						
Abbreviation	Test name	Details				
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter				
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)				
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees				
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only				
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean				
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean				
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAOFDPLRMNCD F	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean				
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPFDPLRMNC DF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees				
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:

1

L1B and L2 Product name n/a

P2P Product name CS_OFFL_SIR_GOP_2_20220805T230456_20220805T235434_C002