

### 1. Overview

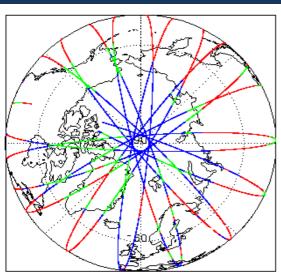
Report Production:	13-Jun-2023	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

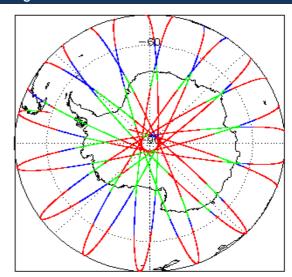
We would love to hear from you!
Please let us know your feedback about these daily
quality reports: What do you like/ dislike? What quality
information do you need? Send your feedback to
cs2\_qc\_team@telespazio.com

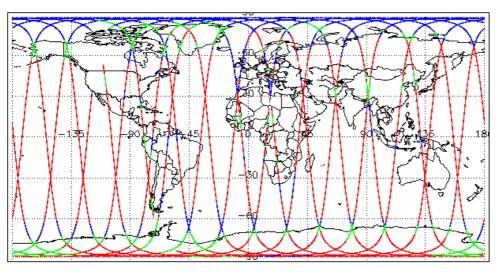
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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 7.2

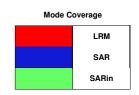
08-Jun-2023 None 09-Jun-2023 None 10-Jun-2023 Nothing planned	Mission / Instrument News	
	08-Jun-2023	None
10-Jun-2023 Nothing planned	09-Jun-2023	None
To dan 2020 Trothing planted	10-Jun-2023	Nothing planned

### 2. Global Coverage









### 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

### 4. IOP Level 1B Data Quality Check

### 4.1 L1B Product Format Check

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

#### 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.

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.

Number of products with errors:

0

#### 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 IOPR products due to a configuration issue. The attitude correction is actually not missing. This will be resolved in the next SW update.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20230609T014938_20230609T015509_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20230609T112449_20230609T112548_C001	Power scaling error	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 products over land, but this is to be expected. The table provides the full list of products flagged.

Number of products with errors:

CS_OFFL_SIR_IOPNIB_20230609T100141_20230609T000497_02230609T000494_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T018127_20230609T000494_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T018127_20230609T018129_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T112355_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T123452_20230609T123716_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T123452_20230609T163631_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T123250_20230609T22370_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T22230_C003009T223720_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T22230_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T22472_20230609T222730_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T03541_20230609T00223_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T03541_20230609T00223_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T031729_20230609T031720_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T031729_20230609T045946_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T063429_20230609T045944_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T063429_20230609T062510_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T1081527_20230609T062510_C001  Loss of Echo The tracking ech	Product	Test Failed	Description
CS_OFFL_SIR_IOPNIB_20230609T081237_20230609T112935_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T112757_20230609T129315_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T129455_20230609T129315_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T163457_20230609T1296361_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T213250_20230609T213654_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T2232601_20230609T223730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T231447_20230609T231723_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T231447_20230609T00223_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T013541_20230609T014137_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T031729_20230609T014137_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T031729_20230609T045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T045510_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T062122_20230609T062943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T062122_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T061227_20230609T06210257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T120118_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T120118_20230609	CS_OFFL_SIR_IOPM1B_20230609T100141_20230609T102149_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPNIB_20230609T112757_20230609T112935_C001  CS_OFFL_SIR_IOPNIB_20230609T123452_20230609T123716_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T163457_20230609T163631_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T12350_20230609T213654_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T222601_20230609T222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T231472_20230609T222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T231472_20230609T222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T231447_20230609T0232_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T03541_20230609T004137_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T031729_20230609T042102_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T045510_20230609T045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T045550_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T081527_20230609T1062310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T081527_20230609T10257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T1204576_20230609T160457_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPNIB_20230609T1204705_20230609T1024912_C001  Loss	CS_OFFL_SIR_IOPN1B_20230609T000407_20230609T000454_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230609T123452_20230609T163631_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T23250_20230609T22730_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T222601_20230609T22730_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T23447_20230609T22730_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T231447_20230609T21722_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T03541_20230609T000223_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T031729_20230609T032102_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T064222_20230609T082310_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180118_20230609T180457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180453_20230609T180457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T183457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T183457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T183457_C001 Loss of Echo The tracking ec	CS_OFFL_SIR_IOPN1B_20230609T081237_20230609T081526_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230609T163457_20230609T213654_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T222601_20230609T222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T222601_20230609T222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T231447_20230609T231723_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T03541_20230609T000223_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T03541_20230609T04137_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T03729_20230609T032102_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T045510_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T06429_20230609T062510_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T06429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T06429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T06429_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T120118_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20230609T180653_20230609T181341_C001  Loss of Echo	CS_OFFL_SIR_IOPN1B_20230609T112757_20230609T112935_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_202306097213250_20230609723654_C001  CS_OFFL_SIR_IOPN1B_202306097222601_202306097222730_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_202306097231447_202306097231723_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_202306097231447_202306097000223_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609703554_20230609700423_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097031729_20230609704517_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097045510_202306097045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609704550_202306097045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097045550_202306097045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097063429_202306097064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097181527_202306097082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097120118_20230609712057_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097120118_20230609712057_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097180653_202306097181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097195709_202306097120479_2001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_202306097180653_202306097181341_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking	CS_OFFL_SIR_IOPN1B_20230609T123452_20230609T123716_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230609T222601_20230609T222730_C001	CS_OFFL_SIR_IOPN1B_20230609T163457_20230609T163631_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20230609T231447_20230609T231723_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T031729_20230609T032102_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T163457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20230609T213250_20230609T213654_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T03541_20230609T032102_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T035729_20230609T032102_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T185709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T185709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T185709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20230609T222601_20230609T222730_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T03541_20230609T04137_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T20429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T20449_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20230609T231447_20230609T231723_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001  Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045546_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T20449_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T20449_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T20449_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230608T235954_20230609T000223_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T013541_20230609T014137_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001  CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T181527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T031729_20230609T032102_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T045510_20230609T045546_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T18053_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T045550_20230609T045943_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T062122_20230609T062510_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T204705_20230609T204912_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T063429_20230609T064302_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T081527_20230609T082310_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001  CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  CS_OFFL_SIR_IOPR1B_20230609T204705_20230609T204912_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20230609T204705_20230609T204912_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T120118_20230609T120257_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T162744_20230609T163457_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20230609T204705_20230609T204912_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20230609T180653_20230609T181341_C001	Loss of Echo	The tracking echo is missing for one or more records
	CS_OFFL_SIR_IOPR1B_20230609T195709_20230609T200429_C001	Loss of Echo	The tracking echo is missing for one or more records
CC OFFI CID IODDAD 0000000000000000000000000000000000	CS_OFFL_SIR_IOPR1B_20230609T204705_20230609T204912_C001	Loss of Echo	The tracking echo is missing for one or more records
LOS OFFIL SIM LOPK IB 20230009 123094 1 20230009 123 1140 C001   LOSS OFFICE OF	CS_OFFL_SIR_IOPR1B_20230609T230941_20230609T231140_C001	Loss of Echo	The tracking echo is missing for one or more records

### 5. IOP Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

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

Number of products with errors:

#### 5.2 L2 Product Header Analysis

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

Number of products with errors:

0

#### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

#### 5.4 L2 Auxiliary Correction Error Check

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

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

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

- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Mean Dynamic Topography: The error value is currently set for products over land and sea ice, but this is to be expected.
- > Altimetric Wind Speed Error: The error value is currently set for products over land and sea ice, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230609T041643_20230609T044450_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPM_2_20230609T045048_20230609T045410_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T000223_20230609T000327_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T000645_20230609T000719_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T004522_20230609T004716_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T005537_20230609T005725_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T014137_20230609T014639_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T031552_20230609T031729_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T032102_20230609T032137_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T040619_20230609T040822_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20230609T045943_20230609T045951_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T054411_20230609T054731_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T055254_20230609T055413_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T064302_20230609T064622_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T072306_20230609T072627_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T081237_20230609T081526_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T085937_20230609T090136_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T091015_20230609T091148_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T095326_20230609T095428_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T104742_20230609T104948_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T121757_20230609T121944_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T123452_20230609T123716_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T131236_20230609T131326_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T140721_20230609T140926_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T162340_20230609T162744_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T171639_20230609T171804_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T172555_20230609T172708_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T185608_20230609T185734_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T190246_20230609T190549_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T203624_20230609T203926_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001	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 Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records

CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPN_2_20230609T231447_20230609T231723_C001	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 Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOPN_2_20230609T235128_20230609T235729_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20230608T235954_20230609T000223_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T013541_20230609T014137_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T031729_20230609T032102_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T032137_20230609T032158_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T044450_20230609T044525_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20230609T045550_20230609T045943_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T045951_20230609T050401_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T063429_20230609T064302_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T081527_20230609T082310_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T095428_20230609T100012_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T113343_20230609T113908_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T131213_20230609T131235_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T131326_20230609T131734_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T145036_20230609T150010_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T162744_20230609T163457_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T180653_20230609T181341_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T181341_20230609T181412_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T194526_20230609T195241_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T195241_20230609T195500_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T212524_20230609T212621_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOPR_2_20230609T212708_20230609T213137_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T213137_20230609T213250_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T230625_20230609T230941_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPR_2_20230609T230941_20230609T231140_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

# 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230609T014938_20230609T015509_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM_2_20230609T112449_20230609T112548_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

### 5.6 L2 Measurement Quality Flag Check

### L2 Quality Flags (20 Hz)

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

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20230609T001245_20230609T001958_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T002001_20230609T002310_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T002942_20230609T004254_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T004716_20230609T005537_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T005810_20230609T011458_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T011638_20230609T011924_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T020003_20230609T022245_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T022859_20230609T023359_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T023815_20230609T030230_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T031108_20230609T031243_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T033528_20230609T040119_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T040822_20230609T041422_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T041643_20230609T044450_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T045048_20230609T045410_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T050720_20230609T054018_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T054731_20230609T055254_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T055608_20230609T060050_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T063059_20230609T063429_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T064622_20230609T071957_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T072627_20230609T072735_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T072740_20230609T073148_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T073554_20230609T074654_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T074841_20230609T075335_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPM_2_20230609T081130_20230609T081138_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T082310_20230609T085830_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T090136_20230609T090634_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T090654_20230609T091015_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T091735_20230609T094845_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T095121_20230609T095326_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T100141_20230609T102149_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T102152_20230609T103807_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T104021_20230609T104533_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T104610_20230609T104742_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T105531_20230609T110916_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T111203_20230609T112428_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T115059_20230609T120117_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T120257_20230609T121708_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T121944_20230609T122445_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T123321_20230609T123451_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T123716_20230609T124706_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T125002_20230609T125509_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T133357_20230609T135533_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T141058_20230609T143533_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T151036_20230609T153529_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T153803_20230609T154318_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T155036_20230609T162340_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T164712_20230609T165343_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T165345_20230609T170501_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T170954_20230609T171442_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T171804_20230609T172353_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPM_2_20230609T173028_20230609T180326_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T182442_20230609T182526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T183854_20230609T184042_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T184158_20230609T185323_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T185734_20230609T190246_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T190924_20230609T194526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T195500_20230609T195709_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T201339_20230609T203215_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T203926_20230609T204149_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T204912_20230609T212524_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T213736_20230609T215644_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T215702_20230609T220952_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T222240_20230609T222601_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T222815_20230609T224323_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T224526_20230609T225505_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T231255_20230609T231447_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T231723_20230609T233404_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPM_2_20230609T235029_20230609T235127_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T113909_20230609T114046_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T131236_20230609T131326_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T163457_20230609T163631_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T172555_20230609T172708_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T000851_20230609T000957_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T015510_20230609T015640_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T131757_20230609T131849_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T182526_20230609T182846_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

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

Number of products with errors:

Number of products with errors.	102	1	
Product		Test Failed	Description
CS_OFFL_SIR_IOPN_2_20230609T000	0223_20230609T000327_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T002	2817_20230609T002941_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T004	1522_20230609T004716_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T005	5537_20230609T005725_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T012	2219_20230609T012607_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T014	1137_20230609T014639_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T022	2814_20230609T022859_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T030	)231_20230609T030422_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T031	441_20230609T031515_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T031	1552_20230609T031729_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T032	2102_20230609T032137_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T040	)421_20230609T040541_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T045	5943_20230609T045951_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T054	1411_20230609T054731_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T055	5254_20230609T055413_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T062	2544_20230609T062621_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T064	H302_20230609T064622_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T075	5335_20230609T075648_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T081	237_20230609T081526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T085	5937_20230609T090136_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T094	1916_20230609T095016_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T103	3843_20230609T104021_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T104	4605_20230609T104610_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T104	1955_20230609T105117_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPN_2_20230609T113	3128_20230609T113343_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

COUNT, SEL, OFFE, 20030007110092_0000007110092_000000710094_000000710094_000000710094_000000710094_000000710094_000000710094_0000000710094_0000000710094_0000000710094_0000000710094_0000000710094_000000000710094_00000000710094_0000000000000000000000000000000000	CS_OFFL_SIR_IOPN_2_20230609T113909_20230609T114046_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
COLORES SIN CIPM 2 20000007130192, 2000007130192, 20010007130192, 2000007130192, 2001000713019	CS_OFFL_SIR_IOPN_2_20230609T114832_20230609T115037_C001		
CR_DPP_BIT_CPPL_2_20000007150788_200000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_2000000071183222 COID  CR_DPP_BIT_CPPL_2_20000007150788_200000007118322 COID  CR_DPP_BIT_CPPL_2_20000007150788_200000007118322 COID  CR_DPP_BIT_CPPL_2_20000007150788_200000007118322 COID  CR_DPP_BIT_CPPL_2_20000007150788_200000007118322 COID  CR_DPP_BIT_CPPL_2_20000007150788_200000007118322 COID  CR_DPP_BIT_CPPL_2_20000007150788_20000000711832 COID  CR_DPP_BIT_CPPL_2_200000007150788_200000000711832 COID  CR_DPP_BIT_CPPL_2_20000007150788_20000000711832 COID  CR_DPP_BIT_CPPL_2_200000007150788_20000000711832 COID  CR_DPP_BIT_CPPL_2_20000000717832 COID  CR_DPP_	CS_OFFL_SIR_IOPN_2_20230609T122519_20230609T122524_C001		
## CODE A BROWN 2 20220907119292 20220907119294 (2010)  ## CODE A BROWN PROPERTY SERVICE STATES STAT	CS_OFFL_SIR_IOPN_2_20230609T123452_20230609T123716_C001		
CS_OFFL_SRI_IOPN_2_2020869713570_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140520_001  CS_OFFL_SRI_IOPN_2_2020869714072_20208987140540_001  CS_OFFL_SRI_IOPN_2_20208697140540_001  CS_OFFL_SRI_IOPN_2_20208697140540_00	CS_OFFL_SIR_IOPN_2_20230609T130758_20230609T131213_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
See   Designation Clark   P.T.M. COCID	CS_OFFL_SIR_IOPN_2_20230609T132823_20230609T133223_C001		
### Bedescater Quality PLPM. OCCE   Allerine Fings and Bedescater Quality PLPM. OCCE   Allerine Fings and Bedescater Quality PLPM. OCCE   Allerine Fings Associated Quality PLPM. OCCE   Allerine Fings Associated Quality PLPM. OCCE   OCCE   Allerine Fings Associated Quality PLPM. OCCE   OCC   OCCE   OCC	CS_OFFL_SIR_IOPN_2_20230609T135703_20230609T140020_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OCCG Backscater Camily	CS_OFFL_SIR_IOPN_2_20230609T140721_20230609T140926_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
SS_OFFL_SIR_LOPN_2_20200009T16240_20200009T19245_COID  Affined Range and Backscated Cuality PLRM. COCO Affined Range and Backscated Cuality Plan Coco Affined Range and Backscated Cuality Plan Coco Affined Range and Backscated Cuality Plan Coco Affined Range SISHA, SVMH, and Backscated Cuality PLRM. COCO Affined Range and Backscated Cuality Plan Range Cuality Plan Coco Affined Range Cuality Plan	CS_OFFL_SIR_IOPN_2_20230609T143906_20230609T144141_C001	OCOG Backscatter Quality	
CS. OFFL_SIR_IOPN_2_20230609T17639_20230609T17804_C001  CS. OFFL_SIR_IOPN_2_20230609T17639_20230609T17804_C001  CS. OFFL_SIR_IOPN_2_20230609T17639_20230609T17804_C001  CS. OFFL_SIR_IOPN_2_20230609T17639_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T18040_2001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T180403_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T18040_C001  CS. OFFL_SIR_IOPN_2_20230609T12040_C001  CS. OFFL_SIR_IOPN_2_20230609T204140_20230609T212050_C001  CS. OFFL_SIR_IOPN_2_20230609T204140_20230609T212050_C001  CS. OFFL_SIR_IOPN_2_20230609T204140_20230609T212050_C001  CS. OFFL_SIR_IOPN_2_20230609T204140_20230609T212050_C001  CS. OFFL_SIR_IOPN_2_20230609T212050_20230609T212050_C001  CO.GO Altranter Range and Backscatter Quality Flags have been set to rone or more records.  CS. OFFL_SIR_IOPN_2_20230609T212050_20230609T120505_C001  CO.GO Altranter Range Coulty FLIM, CO.GO  Altranter	CS_OFFL_SIR_IOPN_2_20230609T162340_20230609T162744_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_JOPN_2_20230609T19255_20	CS_OFFL_SIR_IOPN_2_20230609T163457_20230609T163631_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180424_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180424_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180424_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180424_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180424_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T180442_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T1804442_C001  CS. OFFL_SIR_IOPN.2_20200009T180396_20200009T1804442_C001  CS. OFFL_SIR_IOPN.2_20200009T1803914_20200009T180396_C001  CS. OFFL_SIR_IOPN.2_20200009T1803914_20200009T180396_C001  CS. OFFL_SIR_IOPN.2_20200009T1803914_20200009T180396_C001  CS. OFFL_SIR_IOPN.2_20200009T1803934_20200009T180396_C001  CS. OFFL_SIR_IOPN.2_20200009T180393_20200009T180396_C001  CS. OFFL_SIR_IOPN.2_20200009T18000_20200009T18000_C001  CS. OFFL_SIR_IOPN.2_20200009T18000_20200009T180009T18000_C001  CS. OFFL_SIR_IOPN.2_20200009T18000_20200009T1800009T18000_C001  CS. OFFL_SIR_IOPN.2_20200009T18000_20200009T1800009T18000_C001  CS. OFFL_SIR_IOPN.2_20200009T18000_20200009T180009T18000_C001  CS. OFFL_SIR_IOPN.2_202000009T18000_20200009T180009T18000_C001  CS. OFFL_SIR_IOPN.2_202000009T18000_20200009T180009T18000_C001  CS. OFFL_SIR_IOPN.2_202000009T18000_20200009T180009T18000_C001  CS. OFFL_SIR_IOPN.2_202000009T18000_20200009T12070_C001  CS. OFFL_SIR_IOPN.2_202000009T12000_C001  CS. OFFL_SIR_IOPN.2_202000009T212000_C001  CS. OFFL_SI	CS_OFFL_SIR_IOPN_2_20230609T171639_20230609T171804_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20230609T180482_20230609T180482_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180482_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180482_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180482_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180505_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180505_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_20230609T180505_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_C001  CS_OFFL_SIR_IOPN_2_20230609T180359_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T180005_C001  CS_OFFL_SIR_IOPN_2_20230609T218032_20200609T21707_C001  CCS_OFFL_SIR_IOPN_2_20230609T218032_20200609T21707_C001  CCS_OFFL_SIR_IOPN_2_20230609T218032_20200609T21707_C001  CCCG_Altmeter Range Cuality PLRM, COCGO Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCS_OFFL_SIR_IOPN_2_20230609T218032_20200609T21707_C001  CCCG_Altmeter Range Cuality PLRM, COCGO Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCS_OFFL_SIR_IOPN_2_20230609T218032_20200609T21707_C001  CCCG_Altmeter Range Cuality PLRM, COCGO Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_Altmeter Range and Backscatter Quality Flags have been set for one or more records  CCCG_A	CS_OFFL_SIR_IOPN_2_20230609T172555_20230609T172708_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20230609T182432_20230609T182442_C001  CS_OFFL_SIR_IOPN_2_20230609T182359_20230609T182442_C001  CS_OFFL_SIR_IOPN_2_20230609T182359_20230609T182442_C001  CS_OFFL_SIR_IOPN_2_20230609T183314_20230609T183459_C001  CS_OFFL_SIR_IOPN_2_20230609T183333_20230609T183459_C001  CS_OFFL_SIR_IOPN_2_20230609T18333_20230609T183459_C001  CS_OFFL_SIR_IOPN_2_20230609T18333_20230609T18353_C001  CS_OFFL_SIR_IOPN_2_20230609T18333_20230609T18353_C001  CS_OFFL_SIR_IOPN_2_20230609T185608_20230609T185734_C001  CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001  CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001  CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001  CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001  CS_OFFL_SIR_IOPN_2_20230609T212503_20230609T212707_C001  CS_OFFL_SIR_IOPN_2_20230609T212503_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T22503_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22503_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22503_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22501_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T22500_202	CS_OFFL_SIR_IOPN_2_20230609T180326_20230609T180424_C001		
OCOG Altimeter Range Quality PLRM. OCOG Altimeter Range Guality PLRM. OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality	CS_OFFL_SIR_IOPN_2_20230609T180443_20230609T180652_C001	0 ,	
OCGG Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PLRM, OCGG Altimeter Range and Backscatter Quality PLRM, OCGG Backscat	CS_OFFL_SIR_IOPN_2_20230609T182359_20230609T182442_C001		
CS_OFFL_SIR_IOPN_2_20230609T183833_20230609T183835_C001  and Backscatter Quality PLRM, COCG Altimeter Range and Backscatter Quality PLRM and Backscatter Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range and Backscatter Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range and Backscatter Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range and Backscatter Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range and Backscatter Quality PLRM, COCG Altimeter Range Quality PLRM, COCG Altimeter Range and Backscatter	CS_OFFL_SIR_IOPN_2_20230609T183314_20230609T183458_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001  CS_OFFL_SIR_IOPN_2_20230609T212632_20230609T212707_C001  CS_OFFL_SIR_IOPN_2_20230609T212632_20230609T212707_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T212707_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213054_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213054_C001  CS_OFFL_SIR_IOPN_2_20230609T21503_20230609T21901_C001  CS_OFFL_SIR_IOPN_2_20230609T22503_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T225055_20230609T22500_C001  CS_OFFL_SIR_IOPN_2_20230609T225055_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CCCGA Altimeter Range Quality PLRM, OCCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The OCCGA Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records  The OCCGA Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20230609T183833_20230609T183853_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM oCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_IOPN_2_20230609T212632_20230609T212707_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T222601_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  Altimeter Range Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T231441_20	CS_OFFL_SIR_IOPN_2_20230609T185608_20230609T185734_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T222501_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM, OCOG Altimeter Range Quality PLRM, OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20230609T204149_20230609T204705_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001  CS_OFFL_SIR_IOPN_2_20230609T222601_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T222601_20230609T222730_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_2_20230609T231141_20230609T23155_C001  CCOG Backscatter Quality PLRM, OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one or more records	CS_OFFL_SIR_IOPN_2_20230609T212632_20230609T212707_C001		
and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_IOPN_2_20230609T22505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230449_20230609T23	CS_OFFL_SIR_IOPN_2_20230609T213250_20230609T213654_C001	OCOG Backscatter Quality	
CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001  CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230449_20230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230609T230625_C001  CS_OFFL_SIR_IOPN_3_20230609T230	CS_OFFL_SIR_IOPN_2_20230609T221503_20230609T221901_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
CS_OFFL_SIR_IOPN_2_202306091225813_C001  OCOG Backscatter Quality  Ocog Backscatter Quality  Ocog Backscatter Quality  Or more records  The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_IOPN_2_202306097230449_202306097230625_C001  OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  OCOG Altimeter Range Quality PLRM,  The OCOG Range and Backscatter Quality Flags have been set for one	CS_OFFL_SIR_IOPN_2_20230609T2222601_20230609T222730_C001		
CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001  and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM  and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  CS_OFFL_SIR_IOPN_2_20230609T231141_20230609T231255_C001  CS_OFFL_SIR_IOPN_2_20230609T231141_20230609T231255_C001  The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records  The OCOG Range and Backscatter Quality Flags have been set for one	CS_OFFL_SIR_IOPN_2_20230609T225505_20230609T225831_C001	OCOG Backscatter Quality	
	CS_OFFL_SIR_IOPN_2_20230609T230449_20230609T230625_C001	and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality	and the OCOG Altimeter Range and Backscatter Quality Flags have been
OUG Backscatter Quality or more records	CS_OFFL_SIR_IOPN_2_20230609T231141_20230609T231255_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPR_2_20230608T235954_20230609T000223_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T000455_20230609T000645_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T001137_20230609T001245_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T002439_20230609T002806_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T004254_20230609T004521_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T005725_20230609T005810_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T013541_20230609T014137_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T015510_20230609T015640_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T031243_20230609T031440_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T031729_20230609T032102_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T040120_20230609T040420_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T045510_20230609T045546_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T045550_20230609T045943_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T045951_20230609T050401_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T054018_20230609T054410_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T063429_20230609T064302_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T080115_20230609T080745_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T081527_20230609T082310_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T091148_20230609T091553_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T095428_20230609T100012_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T110916_20230609T111203_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T112548_20230609T112757_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T112935_20230609T113127_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T113343_20230609T113908_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T120118_20230609T120257_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T125632_20230609T125753_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T131326_20230609T131734_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_IOPR_2_20230609T131757_20230609T131849_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T135533_20230609T135703_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T145036_20230609T150010_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T150048_20230609T150211_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T153529_20230609T153625_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T154817_20230609T155035_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T162744_20230609T163457_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T163759_20230609T164015_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T172708_20230609T173028_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T180653_20230609T181341_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T181938_20230609T182213_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T182526_20230609T182846_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T190549_20230609T190923_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T194526_20230609T195241_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T195241_20230609T195500_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T203215_20230609T203624_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T212708_20230609T213137_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T213137_20230609T213250_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T220952_20230609T221502_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T224324_20230609T224526_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T230625_20230609T230941_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality PLRM, OCOG Altimeter Range and Backscatter Quality PLRM	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T233405_20230609T233737_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records
CS_OFFL_SIR_IOPR_2_20230609T234604_20230609T234629_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records

#### L2 Quality Flags (1 Hz & 1 Hz PLRM)

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

> 1 Hz and 1 Hz Ocean SSHA Quality Flags: These flags are currently set for products over sea ice, which is to be expected. The number of products with this error flag set is given below.

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.

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

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

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

Number of products with errors:

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

#### 6.1 P2P Product Format Check

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

lumber of products with errors:

#### 6.2 P2P Product Header Analysis

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

Number of products with errors:

0

#### 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

### 6.4 P2P Auxiliary Correction Error Check

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

0

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

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220230608T231049_20230609T000027_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T000027_20230609T005004_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T005004_20230609T013942_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T013942_20230609T022918_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220230609T022918_20230609T031856_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T031856_20230609T040833_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Perioc Ocean Tide	Topography (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_IOP_220230609T040833_20230609T045811_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T045811_20230609T054748_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T054748_20230609T063726_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T063726_20230609T072702_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T072702_20230609T081640_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220230609T081640_20230609T090617_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T090617_20230609T095555_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T095555_20230609T104531_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T104531_20230609T113509_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T113509_20230609T122446_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T122446_20230609T131424_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T131424_20230609T140401_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T140401_20230609T145339_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)

CS_OFFL_SIR_IOP_2_20230609T145339_20230609T154316_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T154316_20230609T163253_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T163253_20230609T172230_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T172230_20230609T181208_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T181208_20230609T190145_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T190145_20230609T195123_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220230609T195123_20230609T204059_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T204059_20230609T213037_C001		There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_IOP_220230609T222014_20230609T230952_C001	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_2_20230609T230952_20230609T235929_C002	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records

#### 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_2_20230609T013942_20230609T022918_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOP_2_20230609T104531_20230609T113509_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

#### 6.6 P2P Measurement Quality Flag Check

#### P2P Quality Flags (20 Hz)

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

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

Number of products with errors: 28

### P2P Quality Flags (20 Hz PLRM)

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

Number of products with errors: 2

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

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

Number of products with errors: 2

#### 6.8 P2P Ocean Retracking Quality Check

### P2P Retracking Flags (20 Hz)

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

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

Number of products with errors: 2

#### P2P Retracking Flags PLRM

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

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

Number of products with errors: 29

### 7. IOP QCC Report Analysis

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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR IOPM1B	154	154	0	154	0
SIR IOPR1B	119	112	4	108	0
SIR IOPN1B	112	119	0	119	0
SIR_IOPM_2	154	154	102	52	0
SIR IOPR 2	119	112	47	65	0
SIR IOPN 2	112	119	37	81	1
SIR IOP P2P	29	29	0	29	0

#### 7.1 QCC Errors

SIR\_IOPR\_2

#### Number of QCC reports with errors:

i otal ilullibel	or occurrences	OI CACII CITOI					
RL	RL	-	-	-	-	-	
1	1						Т

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

## 7.2 QCC Warnings

Number o	f QCC re	ports with	warnings
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2216

Total number of or	ccurrences of	each wa	arning
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Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD
SIR_IOPM1B	154	0	0	0	0	0	0
SIR_IOPM_2	0	0	43	44	0	38	0
SIR_IOPN1B	107	0	0	0	0	0	0
SIR_IOPN_2	0	0	11	32	5	24	26
SIR_IOPR1B	117	0	0	0	0	0	0
SIR_IOPR_2	0	1	39	53	1	30	26

	Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPEDPLRMSARNO	RPEPOPFDPLRMSINNC	DIRPEPOPEDSARNODE	RPEPOPFDSINNCDF
H		0	0	8	0	0	0	0
	SIR_IOPM1B	U	U	U	U	U	U	U
	SIR_IOPM_2	31	0	37	0	0	0	0
	SIR_IOPN1B	0	0	0	0	0	0	0
	SIR_IOPN_2	16	3	0	0	22	0	31
	SIR_IOPR1B	0	0	0	0	0	0	0
	SIR IOPR 2	15	5	0	54	0	57	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	30	0	0	8	28	0	4
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	28	14	46	52	30
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	53	0	3	68	33	9

ſ	Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHRTASCNSNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF
ł	SIR IOPM1B	0	0	0	1	0	0	0
	_	U	U	0	!	0	0	0
	SIR_IOPM_2	36	0	3	1	0	0	0
	SIR_IOPN1B	0	0	0	0	0	49	2
	SIR_IOPN_2	29	28	14	0	1	0	0
	SIR_IOPR1B	0	0	0	0	0	119	5
	SIR IOPR 2	39	54	2	0	2	0	0

Ī	Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD	RBSZOPOEPNCDF
	SIR_IOP_2_	17	29	29	5	29	17	28

Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNCDI	RPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_IOP_2_	3	16	29	24	20	29	17

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
SIR_IOP_2_	22	28	17	15	29		
Product Type	-	-	-	-	-	-	-

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	Missing Value Int Ocean Excluding Polar Net CDF	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 latitude: 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 latitude: between -70 and 70 degrees					
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitude 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					
RSWHOEPFDPLRMN CDF	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees					

SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Stop_v2_NetCDF	Rel_Time_ASC_Node_Stop mismatch
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:

L1B and L2 Product name

P2P Product name
CS\_OFFL\_SIR\_IOP\_2\_20230609T230952\_20230609T235929\_C002