



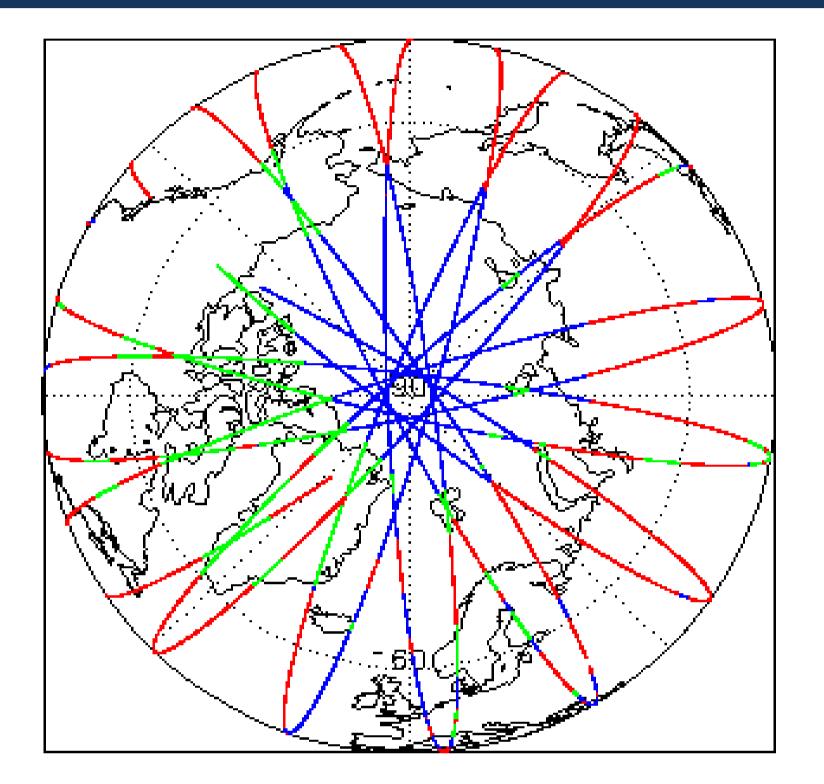
# 1. Overview

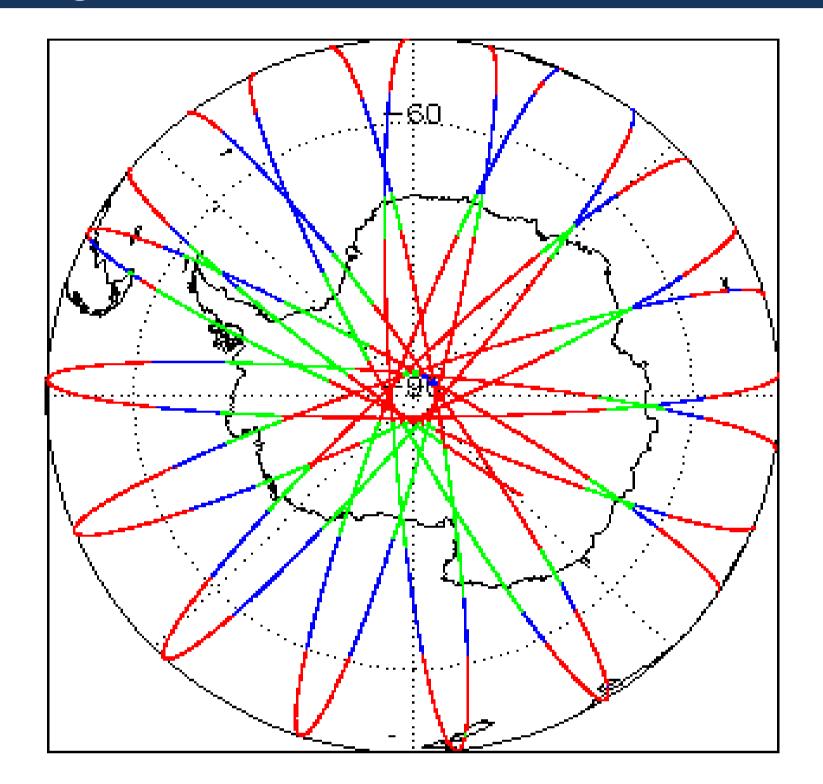
<b>Report Production:</b>	01-Oct-2020	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP) L1B, L2 & P2P Science Data	

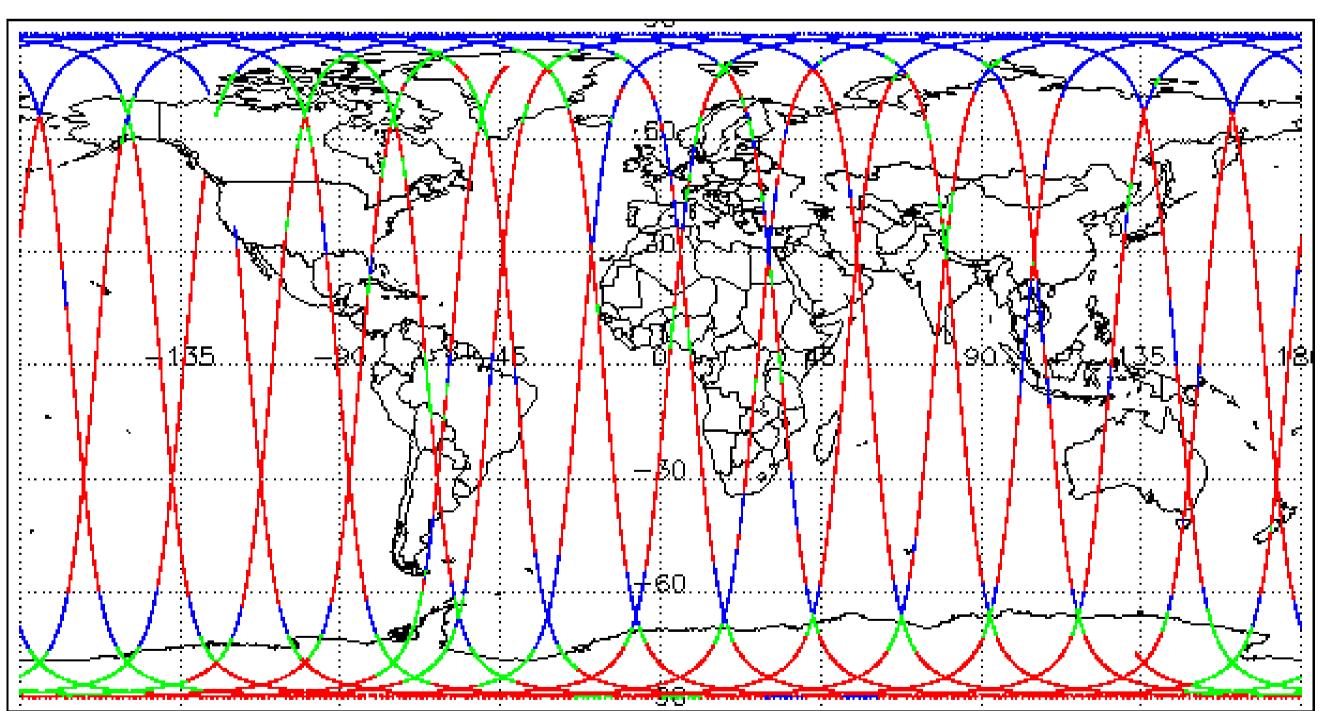
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary 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 7.1 and 7.2

Mission / In	strument News
26-Sep-20	20 None
27-Sep-20	20 None
28-Sep-20	20 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
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# 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 binary product file (.DBL).

Number of products with errors:

#### **4.2 L1B Product Header Analysis**

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

L1B Processing Quality HR: The I1b\_proc\_flag\_hr flag is currently set all L1B IOPR and IOPN products because the I1b\_processing\_quality\_hr field is not correctly configured in the OSAR and OSARIn chains. A modification is required in the next release.

Number of products with errors:

### 4.3 L1B Auxilary Data File Usage Check

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

Number of products with errors:

### 4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

0

2

0

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. This is being investigated and will be updated in the next SW update.

Number of products with errors:

ProductTest FailedDescriptionCS\_OFFL\_SIR\_IOPM1B\_20200927T182235\_20200927T182316\_C001Power scaling errorThere is an error in the scaling of the L1B waveform for one or more<br/>recordsCS\_OFFL\_SIR\_IOPM1B\_20200927T224629\_20200927T230043\_C001Power scaling errorThere is an error in the scaling of the L1B waveform for one or more<br/>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.

21

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20200927T000448_20200927T002107_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20200927T124709_20200927T130005_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20200927T130129_20200927T130343_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPM1B_20200927T204520_20200927T212117_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T003650_20200927T003706_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T040908_20200927T041148_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T064114_20200927T064242_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T094940_20200927T095103_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T104446_20200927T104632_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T112341_20200927T112800_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T112905_20200927T113013_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T122755_20200927T122922_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T130344_20200927T130911_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T195446_20200927T195648_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20200927T234810_20200927T234947_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T013146_20200927T013328_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T072938_20200927T073400_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T090840_20200927T091238_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T113013_20200927T113535_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T153052_20200927T153325_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20200927T212813_20200927T213142_C001	Loss of Echo	The tracking echo is missing for one or more records

## 5. **IOP** Level 2 Data Quality Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a binary product file (.DBL).			
Number of products with errors: 0			
5.2 L2 Product Header Analysis			
For all products, a series of pre-defined checks are performed on the MPH and 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: 0			

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

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

> 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:

CS_OFFL_SIR_IOPM_2_20200927T030846_20200927T030927_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography heimore recordsCS_OFFL_SIR_IOPM_2_20200927T030927_20200927T031157_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography heimore recordsCS_OFFL_SIR_IOPM_2_20200927T115845_20200927T121313_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography heimore recordsCS_OFFL_SIR_IOPM_2_20200927T115845_20200927T121313_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography heimore recordsCS_OFFL_SIR_IOPM_2_20200927T1000244_20200927T121313_C001Mean Dynamic Topography (1)There is an error with the Mean Dynamic Topography heimore records	ght for one or
CS_OFFL_SIR_IOPM_2_202009271030927_202009271031157_C001 Intern Dynamic Topography (1) more records CS_OFFL_SIR_IOPM_2_20200927T115845_20200927T121313_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography height more records Mean Dynamic Topography (1) Total There is an error with the Mean Dynamic Topography (so	
Mean Dynamic Topography (1) more records	ght for one or
Mean Dynamic Topography (1). Total There is an error with the Mean Dynamic Topography (so	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T000204_20200927T000448_C001 Geocentric Ocean Tide (GOT) Total Geocentric Ocean Tide (solution 1: GOT) for one or	•
CS_OFFL_SIR_IOPN_2_20200927T003829_20200927T004436_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) Topography height (solution 1) and the	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T013810_20200927T014025_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) Topography height (solution 1) and the	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T022050_20200927T022232_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T031735_20200927T032220_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T040908_20200927T041148_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography (1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T045815_20200927T050123_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography height	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T054012_20200927T054401_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T062814_20200927T062855_C001 Total Geocentric Ocean Tide (GOT) There is an error with the Total Geocentric Ocean Tide here is an	ight (solution 1:
CS_OFFL_SIR_IOPN_2_20200927T064114_20200927T064242_C001 Total Geocentric Ocean Tide (GOT) There is an error with the Total Geocentric Ocean Tide here is an	eight (solution 1:
CS_OFFL_SIR_IOPN_2_20200927T071953_20200927T072307_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T072820_20200927T072937_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography heights and the Mean Dynamic Topography h	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T081054_20200927T081121_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_20200927T090727_20200927T090840_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T094640_20200927T094914_C001 CS_OFFL_SIR_IOPN_2_20200927T094640_20200927T094914_C001 Fourilibrium Long Period Ocean Tide (FES), Non- Fourilibrium Long Period Ocean Tide	on 2: FES) and
CS_OFFL_SIR_IOPN_2_20200927T094940_20200927T095103_C001 Mean Sea Surface (1), Mean Dynamic Topography (1) There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T112341_20200927T112800_C001 Tide (GOT), Total Geocentric Ocean Tide (FES)_Non-Equilibrium Long Period	=
CS_OFFL_SIR_IOPN_2_20200927T122304_20200927T122536_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1) Topography height (solution 1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T130344_20200927T130911_C001 Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (GOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) Topography (solution 1), the Total Geocentric Ocean Tide (SOT) for one or more records	•
CS_OFFL_SIR_IOPN_2_20200927T144342_20200927T144734_C001 Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Topography (1)	Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T154324_20200927T154506_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography heights and the Mean Dynamic Topography h	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T185234_20200927T185356_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography heighted more records	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T185922_20200927T190235_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography heighted more records	ght for one or
CS_OFFL_SIR_IOPN_2_20200927T203206_20200927T203320_C001 Mean Dynamic Topography (1) There is an error with the Mean Dynamic Topography heigenetics and the more records	ght for one or

	Mean Sea Surface (1), Mean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic
CS_OFFL_SIR_IOPN_2_20200927T203821_20200927T204140_C001	Topography (1)	Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20200927T221257_20200927T221534_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_20200927T221726_20200927T222352_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_20200927T230813_20200927T230934_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_20200927T235034_20200927T235429_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_20200927T013348_20200927T013809_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_20200927T031327_20200927T031735_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_20200927T045155_20200927T045815_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_20200927T062022_20200927T062125_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20200927T063130_20200927T063918_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_20200927T081121_20200927T081850_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_20200927T095103_20200927T095352_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_20200927T095352_20200927T095846_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_20200927T113013_20200927T113535_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_20200927T122537_20200927T122755_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_IOPR_2_20200927T130911_20200927T131124_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_20200927T131124_20200927T131614_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_20200927T133451_20200927T133806_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20200927T144734_20200927T145240_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_20200927T162441_20200927T163300_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_20200927T180347_20200927T181121_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_20200927T182038_20200927T182218_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPR_2_20200927T194133_20200927T194914_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_20200927T194914_20200927T195039_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_20200927T212118_20200927T212813_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_20200927T212813_20200927T213142_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_20200927T230044_20200927T230702_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_20200927T230702_20200927T230813_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_20200927T234948_20200927T235033_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records

### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20200927T182235_20200927T182316_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOPM_2_20200927T224629_20200927T230043_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

### 5.6 L2 Measurement Quality Flag Check

#### L2 Quality Flags (20Hz)

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

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

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

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

97

Number of products with errors:

Description **Product Test Failed** OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_IOPM\_2\_20200926T235957\_20200927T000204\_C001 Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_IOPM\_2\_20200927T000448\_20200927T002107\_C001 Altimeter Range and Backscatter Quality set for one or more records. OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_IOPM\_2\_20200927T002637\_20200927T003251\_C001 Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_IOPM\_2\_20200927T003731\_20200927T003829\_C001 Altimeter Range and Backscatter Quality set for one or more records. OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_IOPM\_2\_20200927T004436\_20200927T004719\_C001 Backscatter Quality for one or more records. OCOG Altimeter Range Quality, OCOG The OCOG Altimeter Range and Backscatter Quality Flags have been set CS\_OFFL\_SIR\_IOPM\_2\_20200927T004735\_20200927T005204\_C001 Backscatter Quality for one or more records. Ocean Altimeter Range, SSHA, SWH The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and Backscatter Quality, OCOG and the OCOG Altimeter Range and Backscatter Quality Flags have been CS\_OFFL\_SIR\_IOPM\_2\_20200927T005505\_20200927T010850\_C001 Altimeter Range and Backscatter Quality set for one or more records.

CS_OFFL_SIR_IOPM_2_20200927T011030_20200927T011313_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_20200927T014031_20200927T014114_C001	•	The Ocean Altimeter Range, SSHA, SWH 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_20200927T014343_20200927T014600_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_20200927T014723_20200927T015313_C001	•	The Ocean Altimeter Range, SSHA, SWH 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_20200927T015557_20200927T015832_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_20200927T015836_20200927T021841_C001	•	The Ocean Altimeter Range, SSHA, SWH 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_20200927T022232_20200927T023111_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_20200927T023451_20200927T025836_C001	-	The Ocean Altimeter Range, SSHA, SWH 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_20200927T030927_20200927T031157_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_20200927T033129_20200927T033332_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_20200927T033335_20200927T035807_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_20200927T040447_20200927T040907_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_20200927T041413_20200927T043749_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_20200927T044530_20200927T045155_C001	•	The Ocean Altimeter Range, SSHA, SWH 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_20200927T050552_20200927T053552_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_20200927T054401_20200927T054948_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_20200927T055314_20200927T055731_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_20200927T060132_20200927T060815_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_20200927T061929_20200927T062021_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_20200927T062855_20200927T063045_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_20200927T064243_20200927T071539_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_20200927T072308_20200927T072820_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_20200927T073400_20200927T074927_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_20200927T080754_20200927T080937_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_20200927T081956_20200927T083118_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_20200927T083343_20200927T084954_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_20200927T085003_20200927T085500_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_20200927T090315_20200927T090727_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_20200927T091238_20200927T093138_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_20200927T093214_20200927T093652_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_20200927T093721_20200927T094454_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_20200927T095846_20200927T101730_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_20200927T101854_20200927T102840_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_20200927T102843_20200927T103414_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_20200927T103645_20200927T104208_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_20200927T105314_20200927T110541_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_20200927T110647_20200927T112341_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_20200927T114649_20200927T115641_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_20200927T115845_20200927T121313_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_20200927T121612_20200927T122107_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_20200927T122113_20200927T122120_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_20200927T122145_20200927T122304_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_20200927T123017_20200927T124040_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_20200927T124709_20200927T130005_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_20200927T133806_20200927T135153_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_20200927T135544_20200927T140022_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_20200927T140025_20200927T140038_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_20200927T140059_20200927T140214_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_20200927T140815_20200927T143341_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_20200927T145506_20200927T150207_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_20200927T150720_20200927T152746_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_20200927T152838_20200927T153051_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_20200927T153553_20200927T153936_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_20200927T153959_20200927T154324_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_20200927T154701_20200927T161328_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_20200927T163333_20200927T164350_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_20200927T164353_20200927T164404_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_20200927T164407_20200927T171025_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_20200927T171858_20200927T172227_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_20200927T172709_20200927T180030_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_20200927T181150_20200927T181609_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_20200927T181659_20200927T181916_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_20200927T184544_20200927T184706_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_20200927T185356_20200927T185922_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_20200927T190643_20200927T192742_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_20200927T193011_20200927T194133_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_20200927T201127_20200927T202754_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_20200927T203320_20200927T203821_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

	Ocean Altimator Pango SSHA SWH	The Ocean Altimator Pange, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_IOPM_2_20200927T204519_20200927T212117_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_20200927T214306_20200927T220559_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_20200927T221534_20200927T221726_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_20200927T222528_20200927T223949_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_20200927T224009_20200927T224147_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_20200927T224629_20200927T230043_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_20200927T230934_20200927T231219_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_20200927T231334_20200927T233033_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_20200927T233247_20200927T234703_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_20200927T235727_20200928T000140_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_20200927T002319_20200927T002400_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_20200927T015435_20200927T015557_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_20200927T054948_20200927T055108_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_20200927T063919_20200927T064032_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_20200927T122755_20200927T122922_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_20200927T135330_20200927T135544_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_20200927T080226_20200927T080256_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_20200927T081900_20200927T081956_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_20200927T143526_20200927T143600_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_20200927T161329_20200927T161420_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_20200927T172707_20200927T172709_C001	Ocean Altimeter Range, SSHA, SWH and Backscatter Quality, OCOG Altimeter Range and Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.

### L2 Quality Flags (20Hz PLRM)

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

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

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

Number of products with errors:

Product	Test Failed	Description
CS OFFL SIR IOPN 2 20200927T000204 20200927T000448 C001	Altimeter Range and Backscatter Quality	Land the ULUG Altimeter Rande and Backscatter Ullality Flads have been

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CS_OFFL_SIR_IOPN_2_20200927T002532_20200927T002547_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_20200927T003829_20200927T004436_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_20200927T013810_20200927T014025_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_20200927T014601_20200927T014723_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_20200927T023112_20200927T023254_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_20200927T030147_20200927T030304_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_20200927T031735_20200927T032220_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_20200927T040333_20200927T040447_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_20200927T054012_20200927T054401_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_20200927T060815_20200927T061010_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_20200927T062553_20200927T062715_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_20200927T064114_20200927T064242_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_20200927T071953_20200927T072307_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_20200927T081054_20200927T081121_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_20200927T085711_20200927T090127_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_20200927T090727_20200927T090840_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_20200927T094640_20200927T094914_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_20200927T094940_20200927T095103_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_20200927T104446_20200927T104632_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_20200927T112341_20200927T112800_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_20200927T113536_20200927T113608_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_20200927T114324_20200927T114524_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_20200927T124228_20200927T124709_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_20200927T130006_20200927T130129_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_20200927T130344_20200927T130911_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_20200927T135330_20200927T135544_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_20200927T140214_20200927T140546_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_20200927T144126_20200927T144250_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_20200927T144342_20200927T144734_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_20200927T150228_20200927T150405_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_20200927T150504_20200927T150720_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_20200927T153325_20200927T153553_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_20200927T172227_20200927T172409_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_20200927T185234_20200927T185356_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_20200927T203206_20200927T203320_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_20200927T203821_20200927T204140_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_20200927T221257_20200927T221534_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_20200927T221726_20200927T222352_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_20200927T234810_20200927T234947_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_20200927T235034_20200927T235429_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_20200927T002107_20200927T002319_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_20200927T011314_20200927T011717_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_20200927T013146_20200927T013328_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_20200927T013348_20200927T013809_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_20200927T021841_20200927T022049_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_20200927T023255_20200927T023451_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_20200927T031327_20200927T031735_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_20200927T035807_20200927T040028_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_20200927T045155_20200927T045815_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_20200927T053552_20200927T054012_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_20200927T055108_20200927T055314_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_20200927T061645_20200927T061927_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_20200927T062716_20200927T062745_C001	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or
	OCOG Backscatter Quality Ocean Altimeter Range, SSHA, SWH	more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags
CS_OFFL_SIR_IOPR_2_20200927T063130_20200927T063918_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_IOPR_2_20200927T064032_20200927T064114_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_20200927T072938_20200927T073400_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_20200927T081121_20200927T081850_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_20200927T085500_20200927T085711_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_20200927T090840_20200927T091238_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_20200927T095103_20200927T095352_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_20200927T095352_20200927T095846_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_20200927T104632_20200927T105313_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_20200927T110541_20200927T110647_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_20200927T113013_20200927T113535_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_20200927T113608_20200927T113742_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_20200927T122537_20200927T122755_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_20200927T130911_20200927T131124_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_20200927T132950_20200927T133226_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_20200927T133229_20200927T133448_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_20200927T140546_20200927T140815_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_20200927T143342_20200927T143520_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_20200927T143526_20200927T143600_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_20200927T144734_20200927T145240_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_20200927T145319_20200927T145506_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_20200927T153052_20200927T153325_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_20200927T154506_20200927T154701_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_20200927T161424_20200927T161455_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_20200927T162441_20200927T163300_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_20200927T171026_20200927T171234_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_20200927T172409_20200927T172707_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_20200927T180347_20200927T181121_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_20200927T181609_20200927T181658_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_20200927T182038_20200927T182218_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_20200927T184707_20200927T185233_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_20200927T190236_20200927T190643_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_20200927T194133_20200927T194914_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_20200927T195648_20200927T195835_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_20200927T200053_20200927T200247_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_20200927T202755_20200927T203206_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_20200927T212118_20200927T212813_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_20200927T212813_20200927T213142_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_20200927T220600_20200927T221257_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_20200927T222352_20200927T222527_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_20200927T230044_20200927T230702_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_20200927T230702_20200927T230813_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_20200927T233033_20200927T233246_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_20200927T234703_20200927T234810_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 & 1Hz PLRM)

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

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

Number of products with errors:

### L2 Retracking Flags (20Hz)

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

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

Number of products with errors:

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

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

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

Number of products with errors:

145

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

### 6.1 P2P Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a NetCDF product file (.nc).
Number of products with errors: 0
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: 0
6.4 P2P Auxiliary Correction Error Check
For all products, the auxiliary corrections within the Geophysical Group are checked for the default error value (32767).
Currently, there are some common auxiliary correction errors raised in the Level 2 products which are expected due to surface type. All common flags are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.
> ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Corection, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
> Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
> 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.

29

Number of products with errors:

Product

**Test Failed** 

Description

CB DPTL_SRI (DP 2: 32200027103402 200027103402 C001       There is an error of the SS height (solution 1), the Main Dynamic Tangamby (f) Turn General Control Tangamby (f)			
Call, DFL_SRL, DP_2_AD00527100463_2000027102522_0001         Topography (1)         Topography (1)         Topography (1)           CS_DFFL_SRL, DP_2_20000271015622_0200027102558_C001         Mon Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_DFFL_SIR_JOP_2_2000027104053_02000271040533_C001         Mean Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_DFFL_SIR_JOP_2_2000027104051_20200027104053_C001         Mean Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_DFFL_SIR_JOP_2_2000027104051_20200027104051_20200027104042_001         Mean Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_DFFL_SIR_JOP_2_20200227104051_20200027105407_001         Mean Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_DFFL_SIR_JOP_2_2020027106407_2020027105407_001         Mean Star Surface (1), Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1), the Mean Dynamic Topography (1)         There is an enror with the MSS height (solution 1) and the Mean Dynamic Topograph	CS_OFFL_SIR_IOP_220200926T235708_20200927T004643_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
CS_OFFL_SIR_UP_2_20200827104522_0000927104532_0000927104542_0001  CS_OFFL_SIR_UP_2_20200827104532_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography (1)  CS_OFFL_SIR_UP_2_20200827104532_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography (1)  CS_OFFL_SIR_UP_2_20200827104542_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography (1)  CS_OFFL_SIR_UP_2_20200827104542_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography (1)  CS_OFFL_SIR_UP_2_20200827105422_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography height (adution 1) and the Mean Dynamic Tooography height (adution 1)  CS_OFFL_SIR_UP_2_20200827105422_0000927104542_0001  Man Sas Sufface (1), Mean Dynamic Tooography height (adution 1) and the Mean Dynamic Tooography height (adution 1)  CS_OFFL_SIR_UP_2_202008271054428_0001  Man Sas Sufface (1), Mean Dynamic Tooography height (adution 1) and the Mean Dynamic Tooography height (adution 1)  CS_OFFL_SIR_UP_2_202008271054428_0000927108407_001  Man Sas Sufface (1), Mean Dynamic Tooography height (adution 1) and the Mean Dynamic Tooography height (adution 1)  CS_OFFL_SIR_UP_2_202008271054428_0000927108428_0001  Man Sas Sufface (1), Mean Dynamic Tooography (1) Taal Generator Ocean Toe (SOT) for one more words  CS_OFFL_SIR_UP_2_20200827106432_00009271081291_0001  Mean Sas Sufface (1), Mean Dynamic Tooography (1) Taal Generator Ocean Toe (SOT) for one more words  CS_OFFL_SIR_UP_2_20200827108428_0001  Mean Sas Sufface (1), Mean Dynamic Tooography height (adution 1) and the Mean Dynamic Tooography (1) Taal Generator Ocean Toe (SOT)  CS_OFFL_SIR_UP_2_20200827108428_00009271081291_0001  Mean Sas Sufface (1), Mean Dynamic Tooography (1) Taal Generator Ocean Toe (SOT) for one more words  CS_OFFL_SIR_UP_2_20200827108428_00009271081291_0001  Mean Sas Sufface (1), Mean Dynamic Tooography (1) Taal Generator Ocean Toe (SOT) For one more words  CS_OFFL_SIR_UP_2_20200827108428_0000927108028_0001  Mean Sas Sufface (1), Mean Dynamic Tooography (1) Taal Generator Ocean Toe	CS_OFFL_SIR_IOP_220200927T004643_20200927T013622_C001		
Column Sector PC_200000271020300271040513_202000271040513_00001         Trapopraphy (1)         Trapopraphy (1)         Trapopraphy (1)           CS_OFFL_SIR_JOP_2_202000271040513_202000271040513_00001         Mean See Surface (1), Mean Dynamic Trapopraphy (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Trapopraphy (1)           CS_OFFL_SIR_JOP_2_202000271040513_002000271040452_0001         Mean See Surface (1), Mean Dynamic Trapopraphy (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Trapopraphy (1)           CS_OFFL_SIR_JOP_2_20200027105402         20200027105402         Topopraphy (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Trapopraphy (1)           CS_OFFL_SIR_JOP_2_20200027105402         20200027105402         Topopraphy (1)         There is an error with the MSS height (solution 1).           CS_OFFL_SIR_JOP_2_20200027105402         202000271072342_0001         There is an error with the MSS height (solution 1).           CS_OFFL_SIR_JOP_2_202000271072342_0001         Trapopraphy (solution 1).         There is an error with the MSS height (solution 1).           CS_OFFL_SIR_JOP_2_202000271072342_02000271072342_0001         Topopraphy (solution 1).         There is an error with the MSS height (solution 1).           CS_OFFL_SIR_JOP_2_20200027109237_2020027109257_0001         Topopraphy (solution 1).         There is an error with the MSS height (solution 1).           CS_OFFL_SIR_JOP_2_20200027109257_2020027109252_0001         Topopraphy (solution 1)	CS_OFFL_SIR_IOP_220200927T013622_20200927T022558_C001		
Cold PTL_SR_UOP_2_200008271081537_00008271084051_2000         Topography (1)         Topography (1)         Topography (1)           CS_OFFL_SIR_UOP_2_200008271046152_202008271046452_0001         Mean Ses Sufface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_UOP_2_202008271045462_202009271054428_0001         Mean Ses Sufface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)           CS_OFFL_SIR_UOP_2_202008271045462_202009271072342_0001         Mean Ses Sufface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1)           CS_OFFL_SIR_UOP_2_202008271073442_002009271072342_0001         Mean Ses Sufface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1)           CS_OFFL_SIR_UOP_2_202008271083407_0200927108382_0001         Mean Ses Sufface (1), Mean Dynamic Topography (1)         Topography (1)           CS_OFFL_SIR_UOP_2_20200827108382_0000         Mean Ses Sufface (1), Mean Dynamic Topography (1)         Topography (1)           CS_OFFL_SIR_UOP_2_20200827108382_0000         Mean Ses Sufface (1), Mean Dynamic Topography (1)         Topography (1)           CS_OFFL_SIR_UOP_2_20200827108382_0000         Mean Ses Sufface (1), Mean Dynamic Topography (1)         Topography (1)           CS_OFFL_SIR_UOP_2_20200827108382_0000         Mean Ses Sufface (1), Mean Dynamic Topography (1)         Topography (1)	CS_OFFL_SIR_IOP_220200927T022558_20200927T031537_C001		
CS_UFFL_SIR_IOP_2_20200327104405_20000371104362_0001         Topography (1)         Topography (1)           CS_OFFL_SIR_IOP_2_20200327104405_202003271054428_0001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), Total Geocentric Cean Topography (2), Total Geoc	CS_OFFL_SIR_IOP_220200927T031537_20200927T040513_C001		
CS_OFFL_SIR_IOP_2_20200827108432_0000       Topography (1)       Topography (eshution 1)         CS_OFFL_SIR_IOP_2_202008271064428_20200827105407_0001       Mean Seas Surface (1), Mean Dynamic Topography (solution 1) and The Total Geocentric Ocean Tide (solution 1)         CS_OFFL_SIR_IOP_2_202008271072342_02008271072342_0001       Mean Sea Surface (1), Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1)         CS_OFFL_SIR_IOP_2_202008271072342_02009271072342_0001       Mean Sea Surface (1), Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1)         CS_OFFL_SIR_IOP_2_202008271072342_02009271081321_0001       Mean Sea Surface (1), Mean Dynamic Topography (solution 1), the MSS height (solution 1) and the Mean Dynamic Topography (solution 1), the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)         CS_OFFL_SIR_IOP_2_202008271081231_02008271080257_0001       Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (solution 1), the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)         CS_OFFL_SIR_IOP_2_202008271080257_0000257_000257_000257_0000257_000257_000257_000257_000257_000257_000	CS_OFFL_SIR_IOP_220200927T040513_20200927T045452_C001		
CS_OFFL_SIR_IOP_2_202009271063407_20200927107342_C001       Topography (1), Total Geocentric Ocean       Topography (2) for one or more records         CS_OFFL_SIR_IOP_2_20200927107342_C001       Mean Sea Surface (1), Mean Dynamic Tode (GOT)       Topography (1), Total Geocentric Ocean       Topography (2) for one or more records         CS_OFFL_SIR_IOP_2_20200927107342_C001       Mean Sea Surface (1), Mean Dynamic Topography (2)       Topography (2)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOP_2_202009271081321       2020092711081325       2020092711081325       2020092711081326       2020092711081326       202009271108136       Topography (1)       Topography (1)       Topography (1)       Topography (1)       Topography (1)	CS_OFFL_SIR_IOP_220200927T045452_20200927T054428_C001		
CS_OFFL_SIR_IOP_2_20200927T072342_20200927T072342_20200927T072342_20200927T072342_20200927T072342_20200927T072342_20200927T081321_C001       Topography (1) Total Geocentric Ocean Tide (solution 1: Topography (1) For an error with the MSS height (solution 1) and the Mean Dynamic Topography (1) Total Geocentric Ocean Tide (SOT). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLition 1), and the Mean Dynamic Topography (1). Total Geocentric Ocean Tide (SOLitio	CS_OFFL_SIR_IOP_220200927T054428_20200927T063407_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
CS_OFFL_SIR_IOP_2_20200927T081321_20200927T090257_C001         Topography (1)         Topography (1)           CS_OFFL_SIR_IOP_2_20200927T081321_20200927T090257_C001         Mean Sea Surface (1), Mean Dynamic Topography (1)         There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1), Total Geocentric Ocean Tide (IGC), Total Geocentric Ocean Tide (IG	CS_OFFL_SIR_IOP_220200927T063407_20200927T072342_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
CS_OFFL_SIR_IOP_2_20200927T090257_20200927T095236_C001       Topography (1)       Topography (1)       Topography (1)         CS_OFFL_SIR_IOP_2_20200927T090257_20200927T095236_C001       Topography (1)       Total Geocentric Ocean       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T095236_20200927T104212_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T104212_20200927T1104212_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T104212_20200927T113151_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T113151_20200927T113151_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1), and tidal corrections for one or more records         CS_OFFL_SIR_IOP_2_20200927T113151_20200927T113105_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T1131105_20200927T140041_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T1140041_20200927T145020_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001       Mean Sea Surface (1), Mean Dynamic       Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020	CS_OFFL_SIR_IOP_220200927T072342_20200927T081321_C001		
CS_OFFL_SIR_IOP_2_20200927T090257_20200927T095236_001       Topography (1). Total Geocentric Ocean Tide (GOT). Total Geocentric Ocean Tide (FES). Non-Entilibrium Long Period Mean Sea Surface (1), Mean Dynamic Topography (1). Total Geocentric Ocean Tide (FES). Non-Entilibrium Long Period Topography (1). Total Geocentric Ocean Tide (FES). Non-Entilibrium Long Period Topography (1). Total Geocentric Ocean Tide (FES). Non-Entilibrium Long Period Topography (1). Total Geocentric Ocean Tide (GOT). Tota	CS_OFFL_SIR_IOP_220200927T081321_20200927T090257_C001	Topography (1)	
CS_OFFL_SIR_IOP_2_20200927T1095236_20200927T1095236_20200927T1095236_20200927T104212_c001       Topography (1)       Topography (solution 1)         Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide       There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records         CS_OFFL_SIR_IOP_2_20200927T113151_20200927T122126_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (solution 1)         CS_OFFL_SIR_IOP_2_20200927T122126_20200927T1131105_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 (GOT)         CS_OFFL_SIR_IOP_2_20200927T131105_20200927T140041_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOP_2_20200927T145020_2020927T145020_C001       Mean Sea Surface (1), Mean Dynamic Topography (1)       There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)         CS_OFFL_SIR_IOP_2_20200927T145020_2020927T145035_C001       Mean Sea Surface (1), Mean Dynamic	CS_OFFL_SIR_IOP_220200927T090257_20200927T095236_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean	Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20200927T104212_20200927T113151_C001Topography (1), Total Geocentric Ocean Tide (CDT), Total Geocentric Ocean Tide (SD, Non-Equilibrium Long Period Ocean TideThere is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more recordsCS_OFFL_SIR_IOP_2_20200927T113151_20200927T122126_C001Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (solution 1)CS_OFFL_SIR_IOP_2_20200927T122126_20200927T131105_C001Mean 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 (SOT)CS_OFFL_SIR_IOP_2_20200927T131105_20200927T140041_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T145020_2020927T153956_C001Mean Sea Surface (1), Mean Dynamic Topography hei	CS_OFFL_SIR_IOP_220200927T095236_20200927T104212_C001		
CS_OFFL_SIR_IOP_2_20200927T122126_20200927T131105_C001Topography (1)Topography height (solution 1)CS_OFFL_SIR_IOP_2_20200927T122126_20200927T131105_C001Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)There is an error with the MSS height (solution 1), the Total Geocentric Ocean Topography (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T140041_20200927T140041_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T145020_20200927T145020_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)CS_OFFL_SIR_IOP_2_20200927T145020_20200927T153956_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean DynamicCS_OFFL_SIR_IOP_2_20200927T153956_20200927T153956_C001Mean Sea Surface (1), Mean DynamicThere is an error with the MSS height (solution 1) and the Mean DynamicCS_OFFL_SIR_IOP_2_20200927T153956_20200927T153956_20200927T153956_20200927T153956_20200927T153956_20200927T153956_20200927T1	CS_OFFL_SIR_IOP_220200927T104212_20200927T113151_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period	Topography (solution 1) and tidal corrections for one or more records
CS_OFFL_SIR_IOP_2_20200927T122126_20200927T131105_C001Topography (1), Total Geocentric Ocean Tide (GOT)Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more recordsCS_OFFL_SIR_IOP_2_20200927T131105_20200927T140041_C001Mean Sea Surface (1), Mean Dynamic Topography (1)There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (solution 1)CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001Mean 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_20200927T145020_20200927T145020_C001Mean 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_20200927T145020_20200927T153956_C001Mean 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_20200927T145020_20200927T162935_C001Mean 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_220200927T113151_20200927T122126_C001		
CS_OFFL_SIR_IOP_2_20200927T140041_20200927T140041_C001Topography (1)Topography height (solution 1)CS_OFFL_SIR_IOP_2_20200927T140041_20200927T145020_C001Mean 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_20200927T145020_20200927T145020_20200927T153956_C001Mean 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_20200927T153956_20200927T153956_C001Mean 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_220200927T122126_20200927T131105_C001	Topography (1), Total Geocentric Ocean	Topography (solution 1), the Total Geocentric Ocean Tide (solution 1:
CS_OFFL_SIR_IOP_220200927T140041_20200927T145020_C001       Topography (1)       Topography height (solution 1)         CS_OFFL_SIR_IOP_220200927T145020_20200927T153956_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_220200927T153956_20200927T153956_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_220200927T131105_20200927T140041_C001		
CS_OFFL_SIR_IOP_2_20200927T145020_20200927T153956_C001       Topography (1)       Topography height (solution 1)         CS_OFFL_SIR_IOP_2_20200927T153956_20200927T153956_C001       Mean Sea Surface (1), Mean Dynamic       Topography height (solution 1)	CS_OFFL_SIR_IOP_220200927T140041_20200927T145020_C001		
	CS_OFFL_SIR_IOP_220200927T145020_20200927T153956_C001		
	CS_OFFL_SIR_IOP_220200927T153956_20200927T162935_C001		

CS_OFFL_SIR_IOP_220200927T162935_20200927T171911_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_220200927T171911_20200927T180849_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_220200927T180849_20200927T185825_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_220200927T185825_20200927T194804_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_220200927T194804_20200927T203740_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_220200927T203740_20200927T212719_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_220200927T212719_20200927T221654_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_220200927T221654_20200927T230633_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_220200927T230633_20200927T235609_C002	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records

### 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

2

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220200927T180849_20200927T185825_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records

6.6 P2P Measurement Quality	Flag Check
P2P Quality Flags (20Hz)	
CryoSat P2P data includes Quality Flags for	each 20 Hz, 20 Hz PLRM and 1 Hz measurement record, copied from the corresponding L2 products.
Since the P2P Quality Flags are copied di	rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	30
P2P Quality Flags (20Hz PLRM)	
Since the P2P Quality Flags are copied di	rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	29
P2P Quality Flags (1 Hz & 1Hz PL	RM)
Since the P2P Quality Flags are copied di	rectly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.
Number of products with errors:	29
6.8 P2P Ocean Retracking Qua	ality Check
P2P Retracking Flags (20Hz)	
-	ng 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): The	nis flag is currently set for products IOPR and IOPN products over sea ice, but this is to be expected.
Number of products with errors:	26
P2P Retracking Flags PLRM	
CryoSat L2 data includes an ocean retracking	g 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): The	nis 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. OP 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

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_IOPM1B	152	152	3	149	0
SIR_IOPR1B	114	98	1	97	0
SIR_IOPN1B	98	114	0	114	0
SIR_IOPM_2	152	152	96	56	0
SIR_IOPR_2	114	98	32	66	0
SIR_IOPN_2	98	114	40	72	2
SIR_IOP_P2P	29	29	0	27	2

### 7.1 QCC Errors

Number of QCC reports with errors:

Total number of occurrences of each error

Product Type	RLOBOPNCDF	RL	RL	RLOBOPNCDF	RL	RL	-	-	-	-	-
SIR_IOPR_2	2	1	2	2	1	2					

Product Type	RLOBOPNCDF	RL	RLOBOPNCDF	RL	-	-	-	-	-	-	-
SIR_IOP_2_	2	2	2	2							

<b>Test Description Key</b>		
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 of QCC repo	orts with warnings	2230												
	Total number of occurrences of each warning													
Product Type	BCSHNCDF	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNCD							
SIR_IOPM1B	149	0	0	0	0	0	0							
SIR_IOPM_2	0	0	45	48	0	44	0							
SIR_IOPN1B	95	0	0	0	0	0	0							
SIR_IOPN_2	0	0	13	37	7	26	32							
SIR_IOPR1B	111	0	0	0	0	0	0							
SIR_IOPR_2	0	2	37	45	0	37	36							

Product Type	RBSZOPOEPNCDF	RNELPOTONCDF	RPEPOPFDLRMNCDF	RPEPOPFDPLRMSARNC		RPEPOPFDSARNCDF	RPEPOPFDSINNCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	31	1	35	0	0	0	0
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	22	0	0	0	27	0	35
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	24	0	0	49	0	55	0

Product Type	RPEPOPLRMNCDF	RPEPOPSARNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF	RSSHAONCDF
SIR_IOPM1B	0	0	0	0	0	0	0
SIR_IOPM_2	32	0	0	5	28	0	1
SIR_IOPN1B	0	0	0	0	0	0	0
SIR_IOPN_2	0	0	32	15	51	52	31
SIR_IOPR1B	0	0	0	0	0	0	0
SIR_IOPR_2	0	47	0	4	60	39	6

Product Type	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SOOHHIFHD	SCSTODHRNCDF	SCSTODNCDF	-
SIR_IOPM1B	0	0	0	0	0	0	
SIR_IOPM_2	41	0	3	0	0	0	
SIR_IOPN1B	0	0	0	0	48	2	
SIR_IOPN_2	28	30	11	2	0	0	
SIR_IOPR1B	0	0	0	0	114	4	
SIR_IOPR_2	37	50	3	3	0	0	

Product Type	IOHHMOOR	MVIOEPFDNCDF	MVIOEPNCDF	MVIONCDF	RBSZOPOEPFDNCDF	RBSZOPOEPFDPLRMNC	RBSZOPOEPNCDF
SIR_IOP_2_	17	29	29	6	29	17	28

Product Type	RNELPOTONCDF	RPEPOPFDPLRMSINNC	DIRPEPOPFDSINNCDF	RPEPOPSINNCDF	RSSBCONCDF	RSSHAOFDNCDF	RSSHAOFDPLRMNCDF
SIR_IOP_2_	1	17	29	25	20	29	18

Product Type	RSSHAONCDF	RSWHOEPFDNCDF	RSWHOEPFDPLRMNCDF	RSWHOEPNCDF	SPHLPQWNCDF	-	-
	24	29	18	14	29		

Test Description Key:			
Abbreviation	Test name	Details	
BCSHNCDF	BurstCounterStep20HzNetCDF	The burst counter should be one higher with regard to the previous burst counter	
IOHHMOOR	IndexOf1Hzin20HzMappingOutOfRange	The mapping of 20 Hz to 1 Hz measurements should be in the range 0 to (number of 1 Hz samples - 1)	
MVIOEPFDNCDF	MissingValueIntOceanExcludingPolarFD2NetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees	
MVIOEPNCDF	MissingValueIntOceanExcludingPolarNetCDF	The value should not be a 'missing value' for surface type 0 only for latitudes between -70 and 70 degrees	
MVIONCDF	MissingValueIntOceanNetCDF	The value should not be a 'missing value' for surface type 0 only	
RBSZOPOEPFDNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2NetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RBSZOPOEPFDPLRM NCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarFD2PLRMNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RBSZOPOEPNCDF	RangeBackscatterSigmaZeroOPOceanExcludingPolarNetCDF	The backscatter sigma zero should be between 700 and 7500 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RNELPOTONCDF	RangeNELPOceanTideOceanNetCDF	The Non-equilibrium long period ocean loading tide height should be between -40mm and 40mm (or missing) for surface type = ocean	
RPEPOPFDLRMNCDF	RangePeakinessExcludingPolarOPFD2LRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RPEPOPFDPLRMSAR NCDF	RangePeakinessExcludingPolarOPFD2PLRMSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RPEPOPFDPLRMSINN CDF	RangePeakinessExcludingPolarOPFD2PLRMSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RPEPOPFDSARNCDF	RangePeakinessExcludingPolarOPFD2SARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	
RPEPOPFDSINNCDF	RangePeakinessExcludingPolarOPFD2SINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees	

RPEPOPLRMNCDF	RangePeakinessExcludingPolarOPLRMNetCDF	The Peakiness should be between 0 and 6400 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSARNCDF	RangePeakinessExcludingPolarOPSARNetCDF	The Peakiness should be between 0 and 15000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RPEPOPSINNCDF	RangePeakinessExcludingPolarOPSINNetCDF	The Peakiness should be between 0 and 90000 (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSSBCONCDF	RangeSeaStateBiasCorrectionOceanNetCDF	The sea state bias correction should be between -500mm and 0mm (or missing) for surface type = ocean
RSSHAOFDNCDF	RangeSeaSurfaceHeightAnomalyOceanFD3NetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAOFDPLRMNCD	RangeSeaSurfaceHeightAnomalyOceanFD3PLRMNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSSHAONCDF	RangeSeaSurfaceHeightAnomalyOceanNetCDF	The sea surface height anomaly should be between -3000mm and 3000mm (or missing) for surface type = ocean
RSWHOEPFDNCDF	RangeSignificantWaveHeightOceanExcludingPolarFD2NetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPFDPLRMNC	RangeSignificantWaveHeightOceanExcludingPolarFD2PLRMNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
RSWHOEPNCDF	RangeSignificantWaveHeightOceanExcludingPolarNetCDF	The significant wave height should be between 0mm and 15000mm (or missing) for surface type = ocean for latitudes between -70 and 70 degrees
SOOHHIFHD	SameOrOneHigher1HzIndexFor20HzData	The 1 Hz index of a 20 Hz sample should be the same or 1 higher than its previous sample
SCSTODHRNCDF	SequenceCounterStepTODHRNetCDF	The sequence counter should be modulo 4 higher with regard to the previous sequence counter

SCSTODNCDF SequenceCounterStep	pTODNetCDF	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 re	ports: 0	