



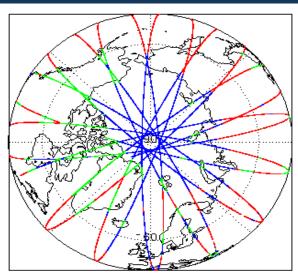
# 1. Overview

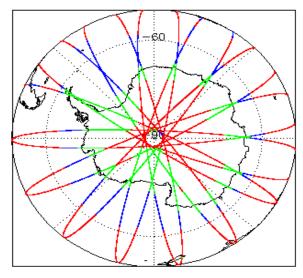
Report Production:	25-Jun-2019	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Intermediate Ocean Products (IOP L1B, L2 & P2P Science Data	

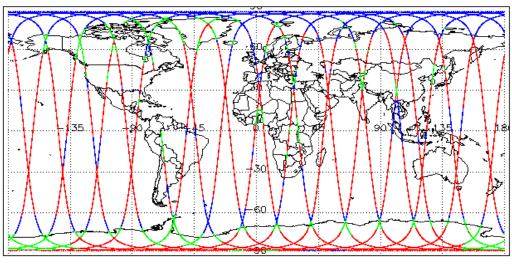
Check	L1 & L2	P2P
Server check: science-pds.cryosat.esa.int	Nominal	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal	Nominal
Product Software Check	Nominal	Nominal
Product Format Check	Nominal	Nominal
Product Header Analysis	Nominal	Nominal
Auxiliary Data File Usage Check	Nominal	Nominal
Auxiliary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

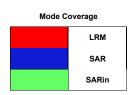
Mission / Instrument News			
20-Jun-2019	None		
21-Jun-2019 None			
22-Jun-2019 Nothing planned			

# 2. Global Coverage









# 3. Instrument Configuration

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

SIRAL instrument(s) in use: SIRAL - A

# 4. IOP Level 1B Data Quality Check

# 4.1 L1B Product Format Check

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

Number of products with errors:

0

## 4.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are performed on the MPH and 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.

### 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:

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#### 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:

3

Product	Test Failed	Description
CS_OFFL_SIR_IOPM1B_20190621T021543_20190621T022016_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20190621T071244_20190621T071315_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_IOPM1B_20190621T124129_20190621T124234_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records

### 4.6 L1B Waveform Group Data Check

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

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

Number of products with errors:

10

CS_OFFL_SIR_IOPM1B_20190621T014730_20190621T012111_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPM1B_20190621T1055803_20190621T10505320_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T005058_20190621T005320_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T041156_20190621T041807_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T053129_20190621T053335_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T054047_20190621T054136_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T103727_20190621T104117_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T104128_20190621T104301_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T113549_20190621T114203_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T121747_20190621T121907_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T121907_20190621T121907_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T121912_120190621T122150_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T173525_20190621T173636_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T172218_20190621T1222122_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T122218_20190621T1222122_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T103047_20190621T103129_C001  Loss of Echo  The tracking echo is missing for one or	Product	Test Failed	Description
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CS_OFFL_SIR_IOPN1B_20190621T121907_20190621T121916_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T121921_20190621T122150_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T173525_20190621T173636_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222047_20190621T222122_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T113549_20190621T114203_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20190621T121921_20190621T122150_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T173525_20190621T173636_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222047_20190621T222122_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T121747_20190621T121907_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20190621T173525_20190621T173636_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222047_20190621T222122_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001  Loss of Echo  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T121907_20190621T121916_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20190621T222047_20190621T222122_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T121921_20190621T122150_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001  Loss of Echo  The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001  Loss of Echo  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T173525_20190621T173636_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001 Loss of Echo The tracking echo is missing for one or more records  CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T222047_20190621T222122_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPN1B_20190621T222518_20190621T222742_C001	Loss of Echo	The tracking echo is missing for one or more records
	CS_OFFL_SIR_IOPR1B_20190621T053047_20190621T053129_C001	Loss of Echo	The tracking echo is missing for one or more records
00.0551.010.1000.17.000.17.000.17.000.000.17.000.000	CS_OFFL_SIR_IOPR1B_20190621T121418_20190621T121638_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPRIB_2019062111/3411_2019062111/3522_C001 Loss of Ecno The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20190621T173411_20190621T173522_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_IOPR1B_20190621T204051_20190621T204519_C001 Loss of Echo The tracking echo is missing for one or more records	CS_OFFL_SIR_IOPR1B_20190621T204051_20190621T204519_C001	Loss of Echo	The tracking echo is missing for one or more records

# 5. IOP Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

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

Number of products with errors:

•

### 5.2 L2 Product Header Analysis

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

Number of products with errors:

0

#### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

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

•			
Product		Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190621T022	2154_20190621T022213_C001		There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20190621T140	0837_20190621T141132_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), and tidal corrections for one or more records
CS_OFFL_SIR_IOPM_2_20190621T155	5803_20190621T160359_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20190621T172	2601_20190621T172819_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPM_2_20190621T213	3743_20190621T215306_C001	Mean Dynamic Topography (1), Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Mean Dynamic Topography height and tidal corrections for one or more records
CS_OFFL_SIR_IOPN_2_20190621T005	6058_20190621T005320_C001		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_20190621T013	3339_20190621T013531_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_20190621T023	039_20190621T023130_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_20190621T031	318_20190621T031456_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T045	3309_20190621T045654_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_20190621T054	.047_20190621T054136_C001		There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOPN_2_20190621T063	3242_20190621T063559_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_20190621T072	2332_20190621T072423_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_20190621T082	2019_20190621T082126_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_20190621T090	0325_20190621T090349_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_20190621T103	3727_20190621T104117_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T104	1128_20190621T104301_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_20190621T113	8549_20190621T114203_C001		There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOPN_2_20190621T121	747_20190621T121907_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T121	921_20190621T122150_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_20190621T135	6622_20190621T140012_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T153	8042_20190621T153704_C001	Total Geocentric Ocean Tide (FES), Non- Equilibrium Long Period Ocean Tide	There is an error with the Total Geocentric Ocean Tide height (solution 2: FES) and the Non-equilibrium Long Period Ocean Tide height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T173	343_20190621T173411_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T180	0514_20190621T180641_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T181	204_20190621T181515_C001	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_20190621T190	0806_20190621T190936_C001		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_20190621T194	455_20190621T194610_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_IOPN_2_20190621T195	5103_20190621T195429_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_20190621T212	2539_20190621T212815_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_20190621T222	2047_20190621T222122_C001		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_20190621T230	0101_20190621T230705_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_20190621T004	451_20190621T005058_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_20190621T022	2622_20190621T023039_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)

Seg. OFFL_SIR_JOPR_2_20190621T07422_20190621T073323_C001  Mans Ses Surface (1), Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  T	CS_OFFL_SIR_IOPR_2_20190621T040304_20190621T041122_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)
Topography   (1)   Topography   (2)   Topography   (2)   Topography   (3)   Topography   (4)   Topography	CS_OFFL_SIR_IOPR_2_20190621T054415_20190621T055203_C001		
Topography (1)  Topography (2)  Topography (1)  Topography (1)  Topography (1)  Topography (1)  Topography (1)  Topography (1)  There is an error with the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)  Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Topography (2)  Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2)  Topography (3)  Topography (4)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2)  Topography height (solution 1)  Topography (3)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (2)  Topography (3)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography (4)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography (4)  Topography (4)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography height (solution 1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (4)  Topography height (solution 1)  Th	CS_OFFL_SIR_IOPR_2_20190621T072423_20190621T073323_C001		
Mean Sea Surface (1), Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T122150_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T122150_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T140636_C001  CS_OFFL_SIR_IOPR_2_20190621T153704_20190621T1546002_C001  CS_OFFL_SIR_IOPR_2_20190621T177632_20190621T172601_C001  CS_OFFL_SIR_IOPR_2_20190621T177632_20190621T172601_C001  CS_OFFL_SIR_IOPR_2_20190621T17632_20190621T177601_C001  CS_OFFL_SIR_IOPR_2_20190621T1763412_20190621T190154_C001  CS_OFFL_SIR_IOPR_2_20190621T190154_20190621T190154_C001  CS_OFFL_SIR_IOPR_2_20190621T190154_20190621T190325_C001  Mean Sea Surface (1), Mean Dynamic Topography (a)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (a)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (a)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (b)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (sol	CS_OFFL_SIR_IOPR_2_20190621T090349_20190621T091113_C001		
Topography (1)  Topography (2)  Topography (3)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and	CS_OFFL_SIR_IOPR_2_20190621T101830_20190621T102015_C001	Mean Dynamic Topography (1)	
Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T142012_20190621T142056_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T153704_20190621T154602_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_20190621T17632_20190621T172601_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_20190621T173411_20190621T173522_C001  Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS	CS_OFFL_SIR_IOPR_2_20190621T104301_20190621T104821_C001		
Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T154602_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T17632_20190621T172601_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T17632_20190621T172601_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)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error wi	CS_OFFL_SIR_IOPR_2_20190621T122150_20190621T122905_C001		
Topography (1)  Topography (2)  Topography (2)  Topography (3)  Topography (4)  Topography height (solution 1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Th	CS_OFFL_SIR_IOPR_2_20190621T140012_20190621T140536_C001		
Topography (1)  Topography (2)  Topography (2)  Topography (3)  Topography (4)  Topography (5)  Mean Dynamic Topography (6)  Topography (7)  There is an error with the Mean Dynamic Topography (8)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography (e)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (e)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (e)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (e)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (e)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (e)  There is an error with the MSS height	CS_OFFL_SIR_IOPR_2_20190621T153704_20190621T154602_C001		
CS_OFFL_SIR_IOPR_2_20190621T185342_20190621T190154_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_20190621T203422_20190621T204051_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_20190621T204051_20190621T204519_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_20190621T221325_20190621T221937_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the M	CS_OFFL_SIR_IOPR_2_20190621T171632_20190621T172601_C001		
Topography (1)  Topography (201906211780342_2019062117190154_2019062117190325_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1: GOT) for one or more records  Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPR_2_20190621T173411_20190621T173522_C001	Mean Dynamic Topography (1)	
Topography (1)  Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPR_2_20190621T185342_20190621T190154_C001		
Topography (1)  Topography (2_20190621T203422_20190621T204051_20190621T204519_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPR_2_20190621T190154_20190621T190325_C001		
Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T221325_20190621T221937_C001  CS_OFFL_SIR_IOPR_2_20190621T221325_20190621T222047_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1: GOT) for one or more records	CS_OFFL_SIR_IOPR_2_20190621T203422_20190621T204051_C001		
Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T221937_20190621T222047_C001  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (GOT)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1: GOT) for one or more records  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topogra	CS_OFFL_SIR_IOPR_2_20190621T204051_20190621T204519_C001		
Topography (1)  CS_OFFL_SIR_IOPR_2_20190621T224311_20190621T224525_C001  Mean Sea Surface (1), Total Geocentric Ocean Tide (solution 1)  There is an error with the MSS height (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records  CS_OFFL_SIR_IOPR_2_20190621T235550_20190621T235723_C001  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS height (solution 1) and the Mean Dynamic There is an error with the MSS	CS_OFFL_SIR_IOPR_2_20190621T221325_20190621T221937_C001		
CS_OFFL_SIR_IOPR_2_201906211224311_201906211224525_C001 Ocean Tide (GOT) Ocean Tide (solution 1: GOT) for one or more records  Mean Sea Surface (1), Mean Dynamic Topography (1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic Topography height (solution 1) and the Mean Dynamic Topography height (solution 1)	CS_OFFL_SIR_IOPR_2_20190621T221937_20190621T222047_C001		
Topography (1) Topography height (solution 1)  CS_OFFL_SIR_IOPR_2_201906211235550_201906211235723_C001  Topography (1) Topography height (solution 1)  Mean Sea Surface (1), Mean Dynamic  There is an error with the MSS height (solution 1) and the Mean Dynamic	CS_OFFL_SIR_IOPR_2_20190621T224311_20190621T224525_C001		
	CS_OFFL_SIR_IOPR_2_20190621T235550_20190621T235723_C001		
	CS_OFFL_SIR_IOPR_2_20190621T235723_20190622T000009_C001		

# 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_20190621T021543_20190621T022016_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_20190621T071244_20190621T071315_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_20190621T124129_20190621T124234_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.

Number of products with errors: 8

Product	Test Failed	Description
CS_OFFL_SIR_IOPM_2_20190621T000027_20190621T000500_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_20190621T000745_20190621T002149_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T010623_20190621T010728_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T010851_20190621T013217_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.

OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
	Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG SAITIMETER RANGE QUAIITY, OCEAN BACKSCATTER QUAIITY, OCOG Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, OCOG Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality, Ocoan SWH Quality, OCOG Backscatter Quality, OCOG Backscatter Quality, OCOG Backscatter Quality OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocoan Altimeter Range Quality, OCOG Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan SWH Quality, Ocoan Backscatter Quality Ocean Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocean Altimeter Range Quality, Ocoan Backscatter Quality Ocean Altimeter Range Quality, Ocoan Backscatter Quality Ocean SWH Quality, Ocoan Backscatter Quality Ocoan Altimeter Range Quality, Ocoan Backscatter Quality Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocean Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocean Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality Ocoan Altimeter Range Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality, Ocoan SSHA Quality, Ocean SWH Quality, Ocoan Backscatter Quality, Ocoan SW

CS_OFFL_SIR_IOPM_2_20190621T090120_20190621T090232_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_20190621T091113_20190621T092532_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T093012_20190621T093154_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T093240_20190621T094719_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T094935_20190621T095457_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_20190621T095515_20190621T095725_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_20190621T100608_20190621T101830_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T102015_20190621T103727_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T110001_20190621T110931_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T111134_20190621T112613_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T112901_20190621T113356_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_20190621T113432_20190621T113549_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_20190621T114233_20190621T114533_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T125005_20190621T130507_C001	Rackscatter Quality, OCOG, Rackscatter Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T130841_20190621T131324_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_20190621T131345_20190621T131508_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_20190621T132028_20190621T134247_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T134300_20190621T134641_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T141929_20190621T144435_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T144824_20190621T145223_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_20190621T145228_20190621T145238_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_20190621T145244_20190621T145609_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_20190621T145936_20190621T151038_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T151611_20190621T152605_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T155444_20190621T155721_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_20190621T155803_20190621T160359_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPM_2_20190621T160402_20190621T162401_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T162654_20190621T163137_C001	Quality  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_20190621T163934_20190621T171301_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T175734_20190621T175949_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T180641_20190621T181204_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_20190621T181851_20190621T184010_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T184255_20190621T185342_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T190421_20190621T190806_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T192412_20190621T192903_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T193050_20190621T194120_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T194610_20190621T195103_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_20190621T195806_20190621T200323_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T200332_20190621T203025_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T205102_20190621T211840_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T213337_20190621T213408_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_20190621T213743_20190621T215306_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T215910_20190621T220640_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T220722_20190621T221325_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_20190621T222208_20190621T222518_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_20190621T222747_20190621T224311_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T224525_20190621T230024_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T230959_20190621T231419_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_20190621T231648_20190621T233058_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPM_2_20190621T233237_20190621T234836_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.

CS_OFFL_SIR_IOPN_2_20190621T003432_20190621T003450_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_20190621T055203_20190621T055328_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_20190621T103727_20190621T104117_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_20190621T121747_20190621T121907_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_20190621T140536_20190621T140549_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T041128_20190621T041156_C001	Ocean Altimeter Range Quality, OCOG Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean and OCOG Altimeter Range, SSHA, SWH 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:

92

Product	Test Failed	Description
CS_OFFL_SIR_IOPN_2_20190621T005058_20190621T005320_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T005346_20190621T005531_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T013339_20190621T013531_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T014358_20190621T014559_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T022016_20190621T022138_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T022439_20190621T022457_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T022555_20190621T022622_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T023039_20190621T023130_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T023600_20190621T023722_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T024113_20190621T024321_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T032159_20190621T032451_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T041156_20190621T041807_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T045309_20190621T045654_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T051929_20190621T052303_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T052320_20190621T052458_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T053842_20190621T053933_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T054047_20190621T054136_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T063242_20190621T063559_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T064111_20190621T064234_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T080956_20190621T081355_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.
CS_OFFL_SIR_IOPN_2_20190621T082019_20190621T082126_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags and the OCOG Altimeter Range and Backscatter Flags have been set fo one or more records.
CS_OFFL_SIR_IOPN_2_20190621T085913_20190621T090120_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one more records.

CS_OFFL_SIR_IOPN_2_20190621T094803_20190621T094935_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T095830_20190621T095908_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T103727_20190621T104117_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T105555_20190621T110001_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_20190621T113549_20190621T114203_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T115252_20190621T115325_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_20190621T115355_20190621T115907_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_20190621T121254_20190621T121418_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_20190621T121747_20190621T121907_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_20190621T135414_20190621T135537_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_20190621T135622_20190621T140012_C001	OCOG Backscatter Quality 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 20190621T141535 20190621T141659 C001	OCOG Altimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20190621T153042_20190621T153704_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records.  The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20190621T173343_20190621T173411_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records. The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20190621T174541_20190621T174630_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records.  The OCOG Range and Backscatter Quality Flags have been set for one or
	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records. The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20190621T181204_20190621T181515_C001	OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM,	more records.  The OCOG Range and Backscatter Quality Flags have been set for one or
CS_OFFL_SIR_IOPN_2_20190621T192053_20190621T192412_C001	OCOG Backscatter Quality Ocean Altimeter Range Quality PLRM,	more records.
CS_OFFL_SIR_IOPN_2_20190621T195103_20190621T195429_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T204626_20190621T204715_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_20190621T212539_20190621T212815_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T213008_20190621T213337_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_20190621T222518_20190621T222742_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_20190621T230101_20190621T230705_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPN_2_20190621T230921_20190621T230959_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_20190621T000645_20190621T000745_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T002149_20190621T002922_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T004451_20190621T005058_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_20190621T013217_20190621T013339_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T022213_20190621T022439_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_20190621T032451_20190621T032622_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T040304_20190621T041122_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T044943_20190621T045309_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T053933_20190621T054033_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_20190621T054415_20190621T055203_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T055328_20190621T055407_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_20190621T062915_20190621T063242_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T064234_20190621T064458_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T072423_20190621T073323_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T080756_20190621T080956_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter Flags have been set for one or more records.
CS_OFFL_SIR_IOPR_2_20190621T090349_20190621T091113_C001	Ocean Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, and the OCOG Altimeter Range and Backscatter 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:

#### 5.8 L2 Ocean Retracking Quality Check

### L2 Retracking Flags (20Hz)

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

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

Number of products with errors: 5

#### 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:

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

# 6.1 P2P Product Format Check

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

Number of products with errors:

#### 6.2 P2P Product Header Analysis

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

Number of products with errors:

# 6.3 P2P Auxiliary Data File Usage Check

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

Number of products with errors:

#### 6.4 P2P Auxiliary Correction Error Check

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

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

- > ECMWF Meteo Corrections: Currently the following corrections are not computed over CONTINENTAL ICE: Dry Tropospheric Correction, Wet Tropospheric Correction, Inverse Barometric Correction and the U-Wind and V-Wind components of the ECMWF model wind vector. This is a known anomaly (CRYO-COP-3) and will be resolved in a future IPF update. The affected products are not reported in the table below.
- > Sea State Bias & Sea State Bias PLRM: The error value is currently set for products over sea ice, but this is to be expected.
- > Mean Sea Surface: The error value is currently set for products over land and sea ice, but this is to be expected.
- > 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: 29

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190620T235943_20190621T004917_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)
		There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220190621T013857_20190621T022831_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)

	Maria Oca Ocafara (4) Maria Buransia	The same of the sa
CS_OFFL_SIR_IOP_220190621T022831_20190621T031810_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_220190621T040744_20190621T045724_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_220190621T045724_20190621T054658_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220190621T054658_20190621T063638_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_220190621T063638_20190621T072612_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_220190621T072612_20190621T081551_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_220190621T081551_20190621T090525_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_220190621T090525_20190621T095504_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_220190621T095504_20190621T104439_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_220190621T104439_20190621T113418_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_220190621T113418_20190621T122352_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_220190621T122352_20190621T131332_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_220190621T131332_20190621T140306_C001	Mean Sea Surface (1), Mean Dynamic Topography (1) wean Sea Surface (1), wean Dynamic	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220190621T140306_20190621T145245_C001	Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (EES) Non-Equilibrium Long Period	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_220190621T145245_20190621T154219_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), 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 the tidal corrections for one or more records
CS_OFFL_SIR_IOP_220190621T154219_20190621T163159_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_220190621T163159_20190621T172133_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_220190621T172133_20190621T181113_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_220190621T181113_20190621T190046_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_220190621T190046_20190621T195026_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220190621T195026_20190621T204000_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_220190621T204000_20190621T212939_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_220190621T212939_20190621T221913_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), 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 the tidal corrections for one or more records
CS_OFFL_SIR_IOP_220190621T221913_20190621T230853_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_IOP_220190621T230853_20190621T235827_C002	Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1)
CS_OFFL_SIR_IOP_220190621T235827_20190622T004807_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)

# 6.5 P2P Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_IOP_220190621T013857_20190621T022831_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_220190621T063638_20190621T072612_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_IOP_220190621T122352_20190621T131332_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 directly from the L2 Quality Flags, please see Section 5.6 for the full list of products affected.

# P2P Quality Flags (20Hz PLRM)

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

Number of products with errors:

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

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

Number of products with errors:

29

# 6.8 P2P Ocean Retracking Quality Check

# P2P Retracking Flags (20Hz)

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

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

Number of products with errors:

25

# P2P Retracking Flags PLRM

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

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

Number of products with errors:

29