







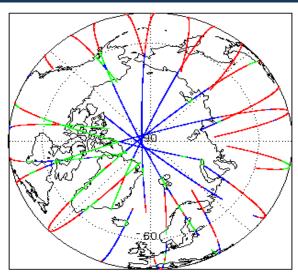
# 1. Overview

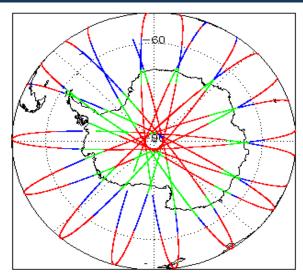
Report Production:	18-Jun-2019		
Processor Used:	CryoSat Ocean Processor		
Data Used:	Near Real Time Ocean Products (NOF L1B & L2 Science Data		

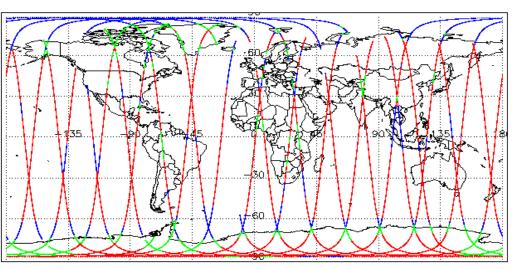
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	See Sections 4.2 and 5.2
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement Confidence Data Check	See Section 4.5, 4.6 and 5.5
Measurement Quality Flag Check	See Section 5.6
Ocean Retracking Quality Check	See Section 5.7

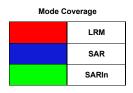
N	Mission / Instrument News		
	16-Jun-2019	None	
	17-Jun-2019	None	
	18-Jun-2019	Nothing planned	

# 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. NOP Level 1B Data Quality Check

### 4.1 L1B Product Format Check

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

#### 4.2 L1B Product Header Analysis

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

Number of products with errors:

#### 4.3 L1B Auxilary Data File Usage Check

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

Dynamic Atmospheric Correction: The DAC is missing in all products because the auxiliary files required are not available in time for processing. This known and expected behaviour.

Number of products with errors:

0

### 4.4 L1B Auxiliary Correction Error Check

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

Number of products with errors:

0

#### 4.5 L1B Measurement Confidence Data Check

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

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

Number of products with errors:

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Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20190617T024216_20190617T024618_C001	Power scaling error	There is an error in the scaling of the L1B waveform for one or more records
CS_OFFL_SIR_NOPM1B_20190617T033115_20190617T040006_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:

16

Product	Test Failed	Description
CS_OFFL_SIR_NOPN1B_20190617T005553_20190617T005813_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T023525_20190617T024007_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T054551_20190617T054635_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T054821_20190617T054911_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T090828_20190617T090844_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T104140_20190617T104232_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T104234_20190617T104556_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T122222_20190617T122502_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T122504_20190617T122647_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190617T230549_20190617T231202_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T010126_20190617T010346_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T051516_20190617T052025_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T072658_20190617T072832_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T081252_20190617T081453_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T102325_20190617T102449_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190617T122024_20190617T122128_C001	Loss of Echo	The tracking echo is missing for one or more records

### 5. NOP 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:

0

### 5.2 L2 Product Header Analysis

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

Number of products with errors:

0

### 5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors:

### 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.
- > 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:

108

Draduot	Test Failed	Description
Product  CS_OFFL_SIR_NOPM_2_20190617T000222_20190617T000512_C001	Test Failed  ECMWF Meteo Corrections	Description There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T000524_20190617T000954_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T014023_20190617T014857_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T031950_20190617T032117_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T032236_20190617T032655_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T050149_20190617T050734_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T064053_20190617T064605_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T081903_20190617T082053_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T082100_20190617T082513_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T090638_20190617T090723_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T095429_20190617T095951_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T095958_20190617T100004_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T100010_20190617T100224_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T104556_20190617T104635_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T113355_20190617T113850_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T113855_20190617T113902_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T113909_20190617T113920_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T113927_20190617T114045_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T131330_20190617T131818_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T131825_20190617T131833_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T131840_20190617T131958_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T145327_20190617T145717_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T145723_20190617T145732_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T145739_20190617T150104_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T163143_20190617T163631_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T163636_20190617T164006_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T173101_20190617T173329_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPM_2_20190617T181135_20190617T181659_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T195100_20190617T195557_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T213309_20190617T213502_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T222704_20190617T223000_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T231202_20190617T231415_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190617T231458_20190617T231915_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190616T235618_20190617T000222_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T000512_20190617T000524_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T000955_20190617T001137_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T005553_20190617T005813_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 2)
CS_OFFL_SIR_NOPN_2_20190617T005854_20190617T010036_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T013836_20190617T014023_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T014857_20190617T015045_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T023525_20190617T024007_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 2)
CS_OFFL_SIR_NOPN_2_20190617T031814_20190617T031950_C001	ECMWF Meteo Corrections, Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections and the Mean Sea Surface Height (solution 1) for one or more records

CS_OFFL_SIR_NOPN_2_20190617T032117_20190617T032236_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T032655_20190617T032915_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T045800_20190617T050149_C001	Surface (1), Mean Dynamic Topography	
CS_OFFL_SIR_NOPN_2_20190617T050735_20190617T050851_C001	ECMWF Meteo Corrections	for one or more records There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T053700_20190617T053832_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS OFFL SIR NOPN 2 20190617T054821 20190617T054911 C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or
	, , , , , ,	more records  There is an array with the ECMM/E Mates Corrections, the Mean Sec.
CS_OFFL_SIR_NOPN_2_20190617T063738_20190617T064053_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T064606_20190617T064726_C001	ECMWF Meteo Corrections, Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections and the Mean Sea Surface Height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T072832_20190617T072910_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T081453_20190617T081902_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T082513_20190617T082623_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
	ECMWF Meteo Corrections, Inverse	There is an error with the ECMWF Meteo Corrections, the Inverse
CS_OFFL_SIR_NOPN_2_20190617T090415_20190617T090630_C001	Barometric Correction, Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non Equilibrium Long Period Ocean Tide	Barometric Correction, the MSS height (solution 1), the Mean Dynamic Topography (solution 1), the Total Geocentric Ocean Tide (solution 1: GOT and solution 2: FES) and the Non-Equilibrium Long Period Ocean Tide for one or more records
CS_OFFL_SIR_NOPN_2_20190617T090724_20190617T090824_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T090828_20190617T090844_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 2)
CS_OFFL_SIR_NOPN_2_20190617T095301_20190617T095429_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T100224_20190617T100409_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T104234_20190617T104556_C001	ECMWF Meteo Corrections, Inverse Barometric Correction, Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT), Total Geocentric Ocean Tide (FES), Non-Equilibrium Long Period Ocean Tide	Total Geocentric Ocean Tide (solution 1: GOT and solution 2:FES) and the
CS_OFFL_SIR_NOPN_2_20190617T104635_20190617T104754_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T113211_20190617T113355_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T113920_20190617T113927_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T114045_20190617T114322_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T122222_20190617T122502_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPN_2_20190617T122504_20190617T122647_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	(solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T131134_20190617T131330_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T131819_20190617T131825_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T131834_20190617T131840_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T131958_20190617T132221_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T140119_20190617T140509_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 2)
CS_OFFL_SIR_NOPN_2_20190617T145101_20190617T145327_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T145717_20190617T145723_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T145733_20190617T145738_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T150104_20190617T150235_C001	ECMWF Meteo Corrections, Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections and the Mean Sea Surface Height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T163019_20190617T163143_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T163631_20190617T163636_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T164007_20190617T164138_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T171801_20190617T171922_C001	Total Geocentric Ocean Tide (GOT)	There is an error with the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T181010_20190617T181135_C001	ECMWF Meteo Corrections, Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections and the Mean Sea Surface Height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T181701_20190617T181839_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records

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CS_OFFL_SIR_NOPN_2_20190617T194946_20190617T195100_C001	ECMWF Meteo Corrections, Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections and the Mean Sea Surface Height (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T195558_20190617T195849_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T213033_20190617T213309_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T213502_20190617T214128_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T222543_20190617T222704_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1), the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T223000_20190617T223101_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T230549_20190617T231202_C001	ECMWF Meteo Corrections, Mean Sea Surface (1), Mean Dynamic Topography (1)	There is an error with the ECMWF Meteo Corrections, the Mean Sea Surface Height (solution 1) and the Mean Dynamic Topography (solution 1) for one or more records
CS_OFFL_SIR_NOPN_2_20190617T231415_20190617T231458_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190617T231916_20190617T232051_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T023114_20190617T023525_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 2)
CS_OFFL_SIR_NOPR_2_20190617T040800_20190617T041607_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 2)
CS_OFFL_SIR_NOPR_2_20190617T054912_20190617T055659_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 2)
CS_OFFL_SIR_NOPR_2_20190617T072910_20190617T073811_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 2)
CS_OFFL_SIR_NOPR_2_20190617T082053_20190617T082100_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T090844_20190617T091616_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 2)
CS_OFFL_SIR_NOPR_2_20190617T095952_20190617T095958_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T100004_20190617T100010_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T104754_20190617T105315_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 2)
CS_OFFL_SIR_NOPR_2_20190617T113850_20190617T113855_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T113903_20190617T113909_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T114322_20190617T114529_C001	Mean Sea Surface (1)	There is an error with the MSS height (solution 1) for one or more records
CS_OFFL_SIR_NOPR_2_20190617T122648_20190617T123357_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 2)
CS_OFFL_SIR_NOPR_2_20190617T131804_20190617T131806_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190617T173820_20190617T174007_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20190617T191431_20190617T191609_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records
CS_OFFL_SIR_NOPR_2_20190617T224805_20190617T225019_C001	Mean Sea Surface (1), Mean Dynamic Topography (1), Total Geocentric Ocean Tide (GOT)	There is an error with the MSS height (solution 1) and the Mean Dynamic Topography height (solution 1) and the Total Geocentric Ocean Tide height (solution 1: GOT) for one or more records
CS_OFFL_SIR_NOPR_2_20190617T235833_20190617T235915_C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or more records

### 5.5 L2 Measurement Confidence Data Check

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

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190617T024216_20190617T024618_C001	Power scaling error	There is an error in the scaling of the L2 waveform for one or more records
CS_OFFL_SIR_NOPM_2_20190617T033115_20190617T040006_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:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190617T000222_20190617T000512_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_NOPM_2_20190617T000524_20190617T000954_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_NOPM_2_20190617T001240_20190617T002642_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Beekar Attni ผยาหัน เฉย Quality, Cocetor	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T011344_20190617T013709_C001	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_NOPM_2_20190617T014023_20190617T014857_C001
CS_OFFL_SIR_NOPM_2_20190617T015219_20190617T021643_C001
CS_OFFL_SIR_NOPM_2_20190617T025027_20190617T030145_C001
CS_OFFL_SIR_NOPM_2_20190617T030506_20190617T031601_C001
CS_OFFL_SIR_NOPM_2_20190617T032236_20190617T032655_C001
CS_OFFL_SIR_NOPM_2_20190617T033115_20190617T040006_C001
CS_OFFL_SIR_NOPM_2_20190617T040737_20190617T040800_C001
CS_OFFL_SIR_NOPM_2_20190617T042320_20190617T043848_C001
CS_OFFL_SIR_NOPM_2_20190617T044420_20190617T045438_C001
CS_OFFL_SIR_NOPM_2_20190617T050149_20190617T050734_C001
CS_OFFL_SIR_NOPM_2_20190617T051017_20190617T051515_C001
CS_OFFL_SIR_NOPM_2_20190617T054635_20190617T054740_C001
CS_OFFL_SIR_NOPM_2_20190617T060033_20190617T063404_C001
CS_OFFL_SIR_NOPM_2_20190617T064053_20190617T064605_C001
CS_OFFL_SIR_NOPM_2_20190617T064948_20190617T070717_C001
CS_OFFL_SIR_NOPM_2_20190617T073811_20190617T080750_C001
CS_OFFL_SIR_NOPM_2_20190617T080801_20190617T081251_C001
CS_OFFL_SIR_NOPM_2_20190617T082100_20190617T082513_C001
CS_OFFL_SIR_NOPM_2_20190617T091616_20190617T093454_C001
CS_OFFL_SIR_NOPM_2_20190617T093506_20190617T093743_C001
CS_OFFL_SIR_NOPM_2_20190617T093747_20190617T095209_C001
CS_OFFL_SIR_NOPM_2_20190617T095429_20190617T095951_C001
CS_OFFL_SIR_NOPM_2_20190617T100010_20190617T100224_C001
CS_OFFL_SIR_NOPM_2_20190617T101100_20190617T102324_C001
CS_OFFL_SIR_NOPM_2_20190617T102449_20190617T104140_C001
CS_OFFL_SIR_NOPM_2_20190617T110316_20190617T111423_C001
CS_OFFL_SIR_NOPM_2_20190617T111626_20190617T113105_C001
CS_OFFL_SIR_NOPM_2_20190617T113355_20190617T113850_C001
CS_OFFL_SIR_NOPM_2_20190617T114732_20190617T115154_C001
CS_OFFL_SIR_NOPM_2_20190617T120512_20190617T121747_C001
CS_OFFL_SIR_NOPM_2_20190617T125533_20190617T131004_C001
CS_OFFL_SIR_NOPM_2_20190617T131330_20190617T131818_C001
CS_OFFL_SIR_NOPM_2_20190617T132532_20190617T134754_C001
CS_OFFL_SIR_NOPM_2_20190617T134757_20190617T135113_C001
CS_OFFL_SIR_NOPM_2_20190617T135350_20190617T135906_C001

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OCOG Altimeter Range Quality, OCOG Backscatter Quality

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Backscatter Quality

Backscatter Quality

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Backscatter Quality

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OCOG Altimeter Range Quality, OCOG Backscatter Quality

The OCOG Altimeter Range and Backscatter Quality Flags have been set or one or more records

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The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records

CS_OFFL_SIR_NOPM_2_20190617T142441_20190617T144928_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T145327_20190617T145717_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Aumeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T150429_20190617T151534_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Beekaratteri@urlttain@cQCoRigctocetter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T152106_20190617T153059_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Beekarattan@erktan@e@callay: vcctter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T160201_20190617T162858_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more rec
CS_OFFL_SIR_NOPM_2_20190617T163143_20190617T163631_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T163636_20190617T164006_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T164429_20190617T165450_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Booksnatten@urittan@cQCaffigr.tscotter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more red
CS_OFFL_SIR_NOPM_2_20190617T165637_20190617T171801_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Becker Atter Guer Hange Quality, Cocetter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more recommendation.
CS_OFFL_SIR_NOPM_2_20190617T173101_20190617T173329_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Beckmatteri@urltan@cQCallerctocetter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more recommendation.
CS_OFFL_SIR_NOPM_2_20190617T180259_20190617T180443_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bอะไชาลโทาเดียาใช้นาผู้ยั Quality, Vocetter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T180643_20190617T180754_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more recommendation.
CS_OFFL_SIR_NOPM_2_20190617T181135_20190617T181659_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Aumeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T182344_20190617T184503_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekarattan.ดิเคาเช็น เดือ QGaRig ใจcotter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more recommendation.
CS_OFFL_SIR_NOPM_2_20190617T184749_20190617T185835_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Booker Atten Quality, Ocean	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T190936_20190617T191248_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekarattan.ดิเคาเช็น เดีย QGaRig ใจcotter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T192903_20190617T194620_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T195100_20190617T195557_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Administer Mange Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T200252_20190617T203540_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekrrattm:ผยาหัน ญ6 Qผลหจางระชา	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more rec
CS_OFFL_SIR_NOPM_2_20190617T205923_20190617T212334_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more rec
CS_OFFL_SIR_NOPM_2_20190617T213309_20190617T213502_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Allimeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T214241_20190617T215923_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekrrattm:ผยาหัน ญ6 Qนิสโจ (ระชา	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T220404_20190617T221822_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bceชากสโทกเดียกให้มาผู้ผิดผิดการเกรา	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T223211_20190617T224805_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Beekarrattarเผียกให้ลเผีย Qนิสิกิรุ เรอาปรา	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T225019_20190617T230506_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T231458_20190617T231915_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Altimeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPM_2_20190617T232136_20190617T233552_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekrrattm:ผยาเห็นเผีย Qนิสโลร เราะ	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPM_2_20190617T233731_20190617T235807_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Bcekrrattm:ผยาหัน ญ6 Qนิสโจ (ระชา	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPN_2_20190617T014857_20190617T015045_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Rackscatter Quality, OCOG Rackscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.
CS_OFFL_SIR_NOPN_2_20190617T095301_20190617T095429_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T104635_20190617T104754_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more rec
CS_OFFL_SIR_NOPN_2_20190617T191739_20190617T191834_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Aumeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T022954_20190617T023051_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more rec
CS_OFFL_SIR_NOPR_2_20190617T071624_20190617T071748_C001	OCOG Altimeter Range Quality, OCOG Backscatter Quality Ocean Aumeter Range Quality, OCOG	The OCOG Altimeter Range and Backscatter Q for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T122024_20190617T122128_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality, OCOG Backscatter	The Ocean and OCOG Altimeter Range, SSHA Quality Flags have been set for one or more reconstruction.

Altimeter Range Quality, Ocean SSHA The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter ecords.

Quality Flags have been set

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

Quality Flags have been set

Quality Flags have been set

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

A, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

Quality Flags have been set

HA, SWH and Backscatter records.

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

Quality Flags have been set

IA, SWH and Backscatter ecords

IA, SWH and Backscatter

Quality Flags have been set

IA, SWH and Backscatter

IA, SWH and Backscatter

IA, SWH and Backscatter

IA, SWH and Backscatter ecords.

Quality Flags have been set

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter ecords.

IA, SWH and Backscatter

Quality Flags have been set

HA, SWH and Backscatter records.

Quality Flags have been set

IA, SWH and Backscatter ecords.

Quality Flags have been set

IA, SWH and Backscatter ecords.

CS_OFFL_SIR_NOPR_2_20190617T173329_20190617T173440_C001	Backscatter Quality	The OCOG Altimeter Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T184503_20190617T184749_C001	Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Rackscatter Quality, OCOG Rackscatter	The Ocean and OCOG Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T194620_20190617T194946_C001		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:

Product	Test Failed	Description
CS_OFFL_SIR_NOPN_2_20190616T235618_20190617T000222_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_NOPN_2_20190617T003649_20190617T003741_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_NOPN_2_20190617T005854_20190617T010036_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_NOPN_2_20190617T010347_20190617T010510_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_NOPN_2_20190617T011221_20190617T011344_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_NOPN_2_20190617T013836_20190617T014023_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_NOPN_2_20190617T021644_20190617T022039_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_NOPN_2_20190617T022936_20190617T022954_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ucean Aumeler Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T023051_20190617T023114_C001	OCEAN Admitted Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPN_2_20190617T023525_20190617T024007_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_NOPN_2_20190617T024054_20190617T024216_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_NOPN_2_20190617T032117_20190617T032236_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_NOPN_2_20190617T045800_20190617T050149_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_NOPN_2_20190617T052437_20190617T052757_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_NOPN_2_20190617T054337_20190617T054459_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_NOPN_2_20190617T054551_20190617T054635_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_NOPN_2_20190617T055659_20190617T055818_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_NOPN_2_20190617T055859_20190617T060033_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ucean Allimeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T063738_20190617T064053_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPN_2_20190617T064606_20190617T064726_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_NOPN_2_20190617T070718_20190617T070947_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_NOPN_2_20190617T081453_20190617T081902_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_NOPN_2_20190617T090415_20190617T090630_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_NOPN_2_20190617T100224_20190617T100409_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_NOPN_2_20190617T104234_20190617T104556_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_NOPN_2_20190617T105315_20190617T105344_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_NOPN_2_20190617T110056_20190617T110316_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_NOPN_2_20190617T113211_20190617T113355_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPN_2_20190617T114045_20190617T114322_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_NOPN_2_20190617T115926_20190617T120451_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_NOPN_2_20190617T121747_20190617T121910_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_NOPN_2_20190617T122128_20190617T122208_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_NOPN_2_20190617T122222_20190617T122502_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_NOPN_2_20190617T122504_20190617T122647_C001	Ocean Aumeter Kange Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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_NOPN_2_20190617T131958_20190617T132221_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_NOPN_2_20190617T135907_20190617T140029_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_NOPN_2_20190617T142008_20190617T142147_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_NOPN_2_20190617T142233_20190617T142441_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_NOPN_2_20190617T145101_20190617T145327_C001	OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SW∄ഹ്ഷിന്പ് ഉറയ്യുന്നു പ്രസ്ത	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_NOPN_2_20190617T163019_20190617T163143_C001	OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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_NOPN_2_20190617T171801_20190617T171922_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_NOPN_2_20190617T172001_20190617T172124_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_NOPN_2_20190617T192551_20190617T192903_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_NOPN_2_20190617T195558_20190617T195849_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Administer Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T205124_20190617T205202_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SV&പ്രസ്തിൻലെ Range വേണ് എപ്പം,	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_NOPN_2_20190617T213502_20190617T214128_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPN_2_20190617T223000_20190617T223101_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Ammeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T230549_20190617T231202_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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_NOPN_2_20190617T231415_20190617T231458_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Ammeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190617T231916_20190617T232051_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPR_2_20190617T003112_20190617T003531_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Aumeter Kange Quality PLKM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T011100_20190617T011221_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SW#มกษณ์ที่คะเอาสลาฐษะให้เล้าเป้าขึ้นเก็บ	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_NOPR_2_20190617T013709_20190617T013836_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SVช่อกพลที่ท่อเอาลลกเรียวใหล่สหัวเหม,	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_NOPR_2_20190617T023114_20190617T023525_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SXชสภาพาเกษอการสาย	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_NOPR_2_20190617T031601_20190617T031814_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SXชสภาพาเท็าอเการลาเรียวใหล่เก็จระเหม,	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_NOPR_2_20190617T040800_20190617T041607_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SXชอก Xxถี่เกียงโครลกษียะใหลดประเทท,	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_NOPR_2_20190617T045439_20190617T045800_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPR_2_20190617T053832_20190617T053903_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_NOPR_2_20190617T054912_20190617T055659_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Rackscatter	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_NOPR_2_20190617T055818_20190617T055859_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Ammeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T063404_20190617T063738_C001	OCOG Attimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality PLRM, Ocean	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_NOPR_2_20190617T071624_20190617T071748_C001	OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality Ocean Ammeter Range Quality PLRM,	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190617T072910_20190617T073811_C001	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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.

OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter	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.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, Ocoan SSHA Quality PLRM, Ocean SWH Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean	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.
OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality	The OCOG Range and Backscatter Quality Flags have been set for one or more records.
	OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWHan Wither Range Quality PLRM, Ocean SWHA Quality PLRM, Ocean Rackscatter Quality PLRM, Ocean SWHA Quality PLRM

### 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:

### 5.7 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 falling at ocean/ land boundaries, but this is expected.

Number of products with errors: 53

#### 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 NOPR and NOPN products over sea ice, but this is to be expected.

Number of products with errors:

13