







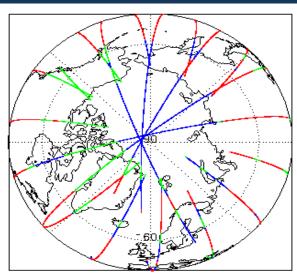
1. Overview

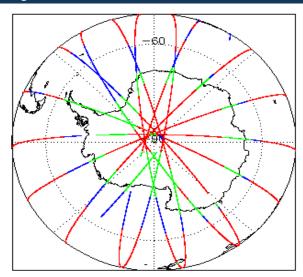
Report Production:	06-Jun-2019		
Processor Used:	CryoSat Ocean Processor		
Data Used:	Near Real Time Ocean Products (NOP) L1B & L2 Science Data		

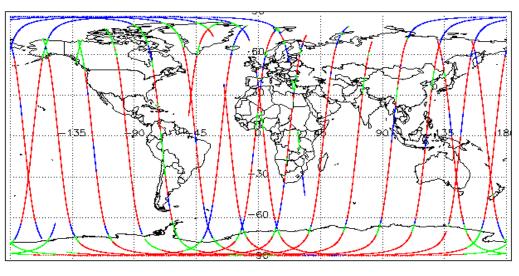
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 5.4
Measurement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

Mission / Instrument News		
26-May-2019	None	
27-May-2019	y-2019 COP IPF1 v3.7 & IPF2 v3.9 installed into operations. New data products available from ~06:00.	
28-May-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).

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.

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:

Ω

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:

0

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:

8

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20190527T122012_20190527T122942_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190527T212331_20190527T215000_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190527T070050_20190527T070143_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190527T070335_20190527T070426_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190527T125557_20190527T130209_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190527T185506_20190527T185713_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190527T234057_20190527T234218_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190527T103309_20190527T103440_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:

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.
- > 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:

72

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190527T075607_20190527T080119_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T093350_20190527T093606_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T093613_20190527T094025_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T102106_20190527T102245_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T110945_20190527T111505_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T111511_20190527T111517_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T111524_20190527T111730_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T124910_20190527T125405_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T125408_20190527T125416_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T125422_20190527T125433_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T125440_20190527T125556_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records

		There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T132135_20190527T132530_C001	ECMWF Meteo Corrections	records There is an error with the Mean Dynamic Topography height for one or
CS_OFFL_SIR_NOPM_2_20190527T142854_20190527T143332_C001	Mean Dynamic Topography (1)	more records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T143338_20190527T143347_C001	ECMWF Meteo Corrections	records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T143353_20190527T143523_C001	ECMWF Meteo Corrections	records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T160728_20190527T161232_C001	ECMWF Meteo Corrections	records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T161236_20190527T161246_C001	ECMWF Meteo Corrections	records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T161252_20190527T161617_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPM_2_20190527T174707_20190527T175146_C001	ECMWF Meteo Corrections	records
CS_OFFL_SIR_NOPM_2_20190527T175149_20190527T175522_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T192650_20190527T193212_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T210700_20190527T211111_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T224824_20190527T225017_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T225325_20190527T225445_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPM_2_20190527T234218_20190527T234540_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T061322_20190527T061703_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_20190527T075249_20190527T075607_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_20190527T080119_20190527T080245_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_20190527T084340_20190527T084440_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_20190527T093002_20190527T093350_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T094025_20190527T094133_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T102246_20190527T102400_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_20190527T111730_20190527T111915_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T115809_20190527T120314_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_20190527T124725_20190527T124910_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T125434_20190527T125440_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T125557_20190527T130209_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_20190527T133751_20190527T134159_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_20190527T142636_20190527T142854_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_20190527T143332_20190527T143338_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T143347_20190527T143353_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T143523_20190527T143734_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS OFFL SIR NOPN 2 20190527T151632 20190527T152021 C001	Mean Dynamic Topography (1)	There is an error with the Mean Dynamic Topography height for one or
	Wican Dynamic Topography (1)	more records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPN_2_20190527T160611_20190527T160727_C001	ECMWF Meteo Corrections	records
CS_OFFL_SIR_NOPN_2_20190527T161233_20190527T161235_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records There is an error with the ECMWF Meteo Corrections for one or more
CS_OFFL_SIR_NOPN_2_20190527T161246_20190527T161252_C001	ECMWF Meteo Corrections	records
CS_OFFL_SIR_NOPN_2_20190527T161617_20190527T161733_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_20190527T165113_20190527T165713_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_20190527T174543_20190527T174707_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T175146_20190527T175149_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T175522_20190527T175639_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_20190527T185506_20190527T185713_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_20190527T192524_20190527T192650_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_20190527T193212_20190527T193232_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T210506_20190527T210700_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_20190527T211112_20190527T211441_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_20190527T224548_20190527T224823_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_20190527T225017_20190527T225324_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_20190527T225445_20190527T225643_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPN_2_20190527T234057_20190527T234218_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) and the Mean Dynamic Topography (solution 1) and the Total Geocentric Ocean Tide height for one or more records
CS_OFFL_SIR_NOPN_2_20190527T234541_20190527T234748_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T070426_20190527T071213_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_20190527T084440_20190527T085457_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_20190527T093606_20190527T093612_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T102400_20190527T103116_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_20190527T111505_20190527T111511_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T111518_20190527T111524_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T120314_20190527T121034_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_20190527T125405_20190527T125408_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T125416_20190527T125422_C001	ECMWF Meteo Corrections	There is an error with the ECMWF Meteo Corrections for one or more records
CS_OFFL_SIR_NOPR_2_20190527T134159_20190527T134852_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_20190527T185000_20190527T185013_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:

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_20190527T071616_20190527T074943_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T075607_20190527T080119_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_20190527T080426_20190527T082300_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T085458_20190527T092819_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T093350_20190527T093606_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_20190527T093613_20190527T094025_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_20190527T094426_20190527T101056_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T103440_20190527T104541_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T105022_20190527T105154_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T105216_20190527T110748_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T110945_20190527T111505_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_20190527T111524_20190527T111730_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_20190527T112620_20190527T113842_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T114044_20190527T115808_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T122012_20190527T122942_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T123144_20190527T124635_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T124910_20190527T125405_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_20190527T125408_20190527T125416_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_20190527T125440_20190527T125556_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_20190527T132135_20190527T132530_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T140946_20190527T142535_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T142854_20190527T143332_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_20190527T144010_20190527T150305_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T153928_20190527T160505_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T160728_20190527T161232_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_20190527T161940_20190527T163048_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T163622_20190527T164617_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T164702_20190527T165113_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T171452_20190527T174507_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T174707_20190527T175146_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_20190527T175149_20190527T175522_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_20190527T175914_20190527T183308_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T184607_20190527T184745_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T191715_20190527T191958_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T192157_20190527T192345_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T192650_20190527T193212_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_20190527T193845_20190527T200022_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T200308_20190527T201206_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T202439_20190527T202828_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T204424_20190527T204912_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T205100_20190527T210227_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T211805_20190527T212321_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T212331_20190527T215000_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T220854_20190527T223849_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T225722_20190527T231318_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T231921_20190527T232626_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190527T234218_20190527T234540_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_20190527T234758_20190528T000320_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190527T133751_20190527T134159_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190527T061021_20190527T061322_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190527T080245_20190527T080426_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190527T125405_20190527T125408_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_NOPR_2_20190527T223849_20190527T224548_C001	Ocean Altimeter Range Quality, Ocean SSHA Quality, Ocean SWH Quality, Ocean Backscatter Quality	The Ocean 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:

CS_OFFL_SIR_NOPR_2_20190527T211442_20190527T211804_C001

34 Product Test Failed Description Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T061322_20190527T061703_C001 Ocean SSHA Quality PLRM, Ocean nave been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Aumeter Range Quality PLRW, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags. OCOG Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean and the OCOG Altimeter Range and Backscatter Flags have been set for CS OFFL SIR NOPN 2 20190527T075249 20190527T075607 C001 one or more records. SWH Quality Ocean Backscatter Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Ocean SSHA Quality PLRM, Ocean CS_OFFL_SIR_NOPN_2_20190527T084340_20190527T084440_C001 have been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Administer Range Quality PLRIVI, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags, OCOG Altimeter Range Quality PLRM, and the OCOG Altimeter Range and Backscatter Flags have been set for CS OFFL SIR NOPN 2 20190527T093002 20190527T093350 C001 Ocean SSHA Quality PLRM, Ocean SWH Quality Ocean Backscatter Ocean Altimeter Range Quality PLRM, one or more records. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPN 2 20190527T110809 20190527T110840 C001 Ocean SSHA Quality PLRM. Ocean have been set for one or more records SWH Quality, Ocean Backscatter Quality OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or CS_OFFL_SIR_NOPN_2_20190527T115809_20190527T120314_C001 OCOG Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T125557_20190527T130209_C001 Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T133751_20190527T134159_C001 Ocean SSHA Quality PLRM, Ocean ave been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T142636_20190527T142854_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM. The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T151632_20190527T152021_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or CS_OFFL_SIR_NOPN_2_20190527T161617_20190527T161733_C001 OCOG Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPN_2_20190527T192524_20190527T192650_C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPN 2 20190527T202339 20190527T202413 C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or CS OFFL SIR NOPN 2 20190527T210506 20190527T210700 C001 OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or CS OFFL SIR NOPN 2 20190527T224548 20190527T224823 C001 OCOG Backscatter Quality OCOG Altimeter Range Quality PLRM, The OCOG Range and Backscatter Quality Flags have been set for one or CS_OFFL_SIR_NOPN_2_20190527T225017_20190527T225324_C001 OCOG Altimeter Range Quality PLRM, OCOG Backscatter Quality The OCOG Range and Backscatter Quality Flags have been set for one or CS_OFFL_SIR_NOPN_2_20190527T225445_20190527T225643_C001 more records. Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T061021_20190527T061322_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T070426_20190527T071213_C001 have been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T074943_20190527T075249_C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Ocean SSHA Quality PLRM, Ocean CS OFFL SIR NOPR 2 20190527T092819 20190527T093002 C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPR 2 20190527T102400 20190527T103116 C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T111945_20190527T112620_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T120314_20190527T121034_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T134159_20190527T134852_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T142536_20190527T142635_C001 Ocean SSHA Quality PLRM, Ocean have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Ocean SSHA Quality PLRM, Ocean CS_OFFL_SIR_NOPR_2_20190527T143839_20190527T144010_C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS_OFFL_SIR_NOPR_2_20190527T170503_20190527T170614_C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPR 2 20190527T170755 20190527T170910 C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags CS OFFL SIR NOPR 2 20190527T192345 20190527T192524 C001 have been set for one or more records. SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags Ocean SSHA Quality PLRM, Ocean CS_OFFL_SIR_NOPR_2_20190527T201206_20190527T201456_C001 nave been set for one or more records SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM,

Ocean SSHA Quality PLRM, Ocean

SWH Quality, Ocean Backscatter Quality

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags

have been set for one or more records.

CS_OFFL_SIR_NOPR_2_20190527T220241_20190527T220641_C001

CS_OFFL_SIR_NOPR_2_20190527T223849_20190527T224548_C001

Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality Ocean Altimeter Range Quality PLRM, Ocean SSHA Quality PLRM, Ocean SWH Quality, Ocean Backscatter Quality

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.

The Ocean Altimeter Range, SSHA, SWH and Backscatter Quality Flags have been set for one or more records.

L2 Quality Flags (1 Hz & 1Hz PLRM)

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

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

Number of products with errors:

121

5.7 L2 Ocean Retracking Quality Check

L2 Quality 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:

33

L2 Quality 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:

97