







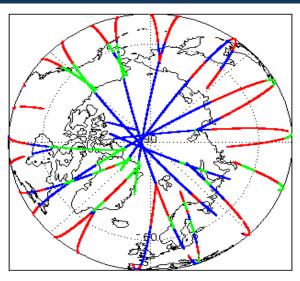
## 1. Overview

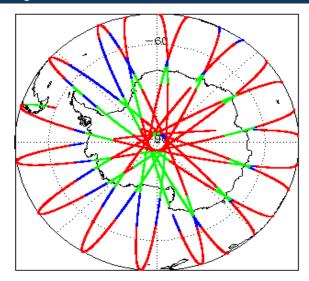
Report Production:	16-Apr-2019	
Processor Used:	CryoSat Ocean Processor	
Data Used:	Near Real Time Ocean Products (NC L1B & L2 Science Data	

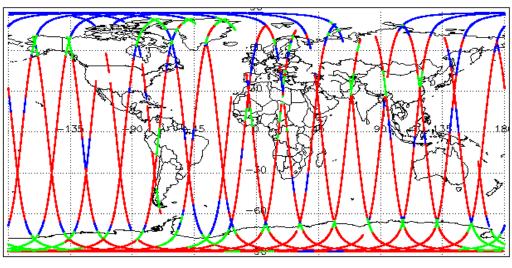
Check	L1 & L2
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	Nominal
Measurement Confidence Data Check	See Section 4.5, 4.6
Range, SWH & Backscatter Measurement Check	See Section 5.6, 5.7
Ocean Retracking Quality Check	See Section 5.8

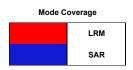
Mission / Instru	iment News
14-Apr-2019	None
15-Apr-2019	None
16-Apr-2019	Nothing planned

# 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:

#### 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:

Λ

#### 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_NOPN1B_20190415T030223_20190415T030330_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190415T035538_20190415T035726_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190415T061455_20190415T061524_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190415T093034_20190415T093121_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190415T142836_20190415T142908_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPN1B_20190415T192304_20190415T192728_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190415T030752_20190415T030958_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPR1B_20190415T031132_20190415T031255_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).

Number of products with errors:

0

### 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:

0

#### 5.6 L2 Range Measurement Check

CryoSat L2 data includes an Ocean and Ice Range Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are two common status flags 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.

Ocean Range Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Range Averaging Status Flag: This flag is currently set for products over land, but this is to be expected.

Number of products with errors:

77

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190414T235816_20190415T002056_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T002404_20190415T002418_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T003031_20190415T003224_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T003930_20190415T005417_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T010126_20190415T011004_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T012433_20190415T012707_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T012848_20190415T014545_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

CS OFFI CID NORM 3 20400445T044742 20400445T020205 C004	Occor Banco Avenaging Status	The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T014743_20190415T020205_C001	Ocean Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T020928_20190415T021135_C001	Ice Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T021229_20190415T021636_C001	Ice Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T021824_20190415T023350_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190415T023551_20190415T024514_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T030330_20190415T030422_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T031255_20190415T032443_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T033009_20190415T034428_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T034725_20190415T035538_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T035757_20190415T041357_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T041742_20190415T042229_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T045640_20190415T052339_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T052615_20190415T052817_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T052856_20190415T053411_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T053659_20190415T060206_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T063439_20190415T064524_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T065101_20190415T070211_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T070537_20190415T070629_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T070822_20190415T071426_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T071550_20190415T074519_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T075229_20190415T075338_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T080738_20190415T084118_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190415T084730 20190415T085257 C001	Ice Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T085436_20190415T090048_C001		records. The Ocean Range Averaging Status Flag has been set for one or more
	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T093140_20190415T093441_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T094656_20190415T095536_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T095820_20190415T102041_C001	Ocean Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T102629_20190415T102734_C001	Ice Range Averaging Status	records.  The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T102737_20190415T103146_C001	Ice Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T103348_20190415T105323_C001	Ocean Range Averaging Status	records.  The Ocean Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T112522_20190415T115853_C001	Ocean Range Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190415T121342_20190415T121511_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T121732_20190415T124859_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T130908_20190415T131613_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T132202_20190415T133826_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T134013_20190415T134530_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T141123_20190415T142342_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T145051_20190415T145937_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T150253_20190415T151722_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T151939_20190415T152441_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T153313_20190415T153422_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T153905_20190415T154543_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T155027_20190415T155502_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T163425_20190415T165640_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T170008_20190415T170357_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T171014_20190415T173803_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T181054_20190415T183625_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190415T183751 20190415T184311 C001	Ice Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T184317_20190415T184643_C001	Ice Range Averaging Status	records. The Ice Range Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T184953_20190415T190111_C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190415T190649 20190415T192304 C001	Ocean Range Averaging Status	records. The Ocean Range Averaging Status Flag has been set for one or more
	1	records.

		The Ocean Bongs Averaging Status Flag has been set for any an arrange
CS_OFFL_SIR_NOPM_2_20190415T194613_20190415T200611_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T200942_20190415T201603_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T201751_20190415T202548_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T202903_20190415T210302_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T211623_20190415T211725_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T231340_20190415T231945_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T233903_20190415T234138_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T234832_20190416T002051_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190415T030422_20190415T030518_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190415T070416_20190415T070537_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190415T192304_20190415T192728_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190415T121153_20190415T121342_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190415T231945_20190415T232132_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.

### 5.7 L2 SWH and Backscatter Measurement Check

CryoSat L2 data includes a SWH Averaging Status flag and an Ocean and Ice Backscatter Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when

Currently, there are three common status flags 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.

**SWH Averaging Status Flag:** This flag is currently set for products over land and sea ice, but this is to be expected.

Ocean Backscatter Averaging Status Flag: This flag is currently set for products over land and sea ice, but this is to be expected.

Ice Backscatter Averaging Status Flag: This flag is currently set for products over land, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190414T235816_20190415T002056_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T002404_20190415T002418_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T003031_20190415T003224_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T003930_20190415T005417_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T005421_20190415T005645_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T010126_20190415T011004_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T012433_20190415T012707_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T012848_20190415T014545_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T014743_20190415T020205_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T020928_20190415T021135_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T021229_20190415T021636_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T021824_20190415T023350_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T023551_20190415T024514_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T030330_20190415T030422_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T031255_20190415T032443_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T033009_20190415T034428_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T034725_20190415T035538_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T035757_20190415T041357_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T041742_20190415T042229_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T045640_20190415T052339_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T052615_20190415T052817_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T052856_20190415T053411_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T053659_20190415T060206_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T063439_20190415T064524_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.

	CWILL Averaging Otatus Occurs	The SWILL and Ocean Averaging Status Flores have been stated
CS_OFFL_SIR_NOPM_2_20190415T065101_20190415T070211_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T070822_20190415T071426_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T071550_20190415T074519_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T075229_20190415T075338_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T080738_20190415T084118_C001	SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T084730_20190415T085257_C001	Backscatter Averaging Status  Ice Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190415T085436 20190415T090048 C001	SWH Averaging Status, Ocean	records.  The SWH and Ocean Averaging Status Flags have been set for one or
	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T093140_20190415T093441_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T094656_20190415T095536_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T095820_20190415T102041_C001	Backscatter Averaging Status	more records.
CS_OFFL_SIR_NOPM_2_20190415T102737_20190415T103146_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T103348_20190415T105323_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T112522_20190415T115853_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T121732_20190415T124859_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T130908_20190415T131613_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T132202_20190415T133826_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T134013_20190415T134530_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T135545_20190415T140909_C001	SWH Averaging Status, Ocean	records.  The SWH and Ocean Averaging Status Flags have been set for one or
	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T141123_20190415T142342_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T145051_20190415T145937_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T150253_20190415T151722_C001	Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T151939_20190415T152441_C001	Ice Backscatter Averaging Status	records.
CS_OFFL_SIR_NOPM_2_20190415T152518_20190415T152619_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T153313_20190415T153422_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T153905_20190415T154543_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T155027_20190415T155502_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T163425_20190415T165640_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T170008_20190415T170357_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T171014_20190415T173803_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T181054_20190415T183625_C001	SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T183751_20190415T184311_C001	Backscatter Averaging Status  Ice Backscatter Averaging Status	more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS OFFL SIR NOPM 2 20190415T184317 20190415T184643 C001	Ice Backscatter Averaging Status	records.  The Ice Backscatter Averaging Status Flag has been set for one or more
	SWH Averaging Status, Ocean	records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T184953_20190415T190111_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T190649_20190415T192304_C001	Backscatter Averaging Status SWH Averaging Status, Ocean	more records. The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T194613_20190415T200611_C001	Backscatter Averaging Status	more records.
CS_OFFL_SIR_NOPM_2_20190415T200942_20190415T201603_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T201751_20190415T202548_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T202903_20190415T210302_C001	SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.
	SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T211623_20190415T211725_C001	Backscatter Averaging Status	more records.
CS_OFFL_SIR_NOPM_2_201904151211623_201904151211725_C001  CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001	SWH Averaging Status, Ocean Backscatter Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.
	SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001	SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001 CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001 CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001	SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001 CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001 CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001 CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001	SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001	SWH Averaging Status, Ocean Backscatter Averaging Status Ice Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The loe Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001  CS_OFFL_SIR_NOPM_2_20190415T233903_20190415T234138_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001  CS_OFFL_SIR_NOPM_2_20190415T233903_20190415T234138_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001  CS_OFFL_SIR_NOPM_2_20190415T233903_20190415T234138_C001  CS_OFFL_SIR_NOPM_2_20190415T234832_20190416T002051_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flags have been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190415T213821_20190415T215518_C001  CS_OFFL_SIR_NOPM_2_20190415T215723_20190415T220237_C001  CS_OFFL_SIR_NOPM_2_20190415T220837_20190415T223050_C001  CS_OFFL_SIR_NOPM_2_20190415T223335_20190415T224306_C001  CS_OFFL_SIR_NOPM_2_20190415T225426_20190415T225816_C001  CS_OFFL_SIR_NOPM_2_20190415T232132_20190415T233359_C001  CS_OFFL_SIR_NOPM_2_20190415T233903_20190415T234138_C001  CS_OFFL_SIR_NOPM_2_20190415T234832_20190416T002051_C001  CS_OFFL_SIR_NOPM_2_20190415T030422_20190415T030518_C001	SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  Ice Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status  SWH Averaging Status, Ocean Backscatter Averaging Status	The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Ice Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The Loe Backscatter Averaging Status Flag has been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.  The SWH and Ocean Averaging Status Flags have been set for one or more records.

CS\_OFFL\_SIR\_NOPR\_2\_20190415T121153\_20190415T121342\_C001

CS\_OFFL\_SIR\_NOPR\_2\_20190415T231945\_20190415T232132\_C001

SWH Averaging Status, Ocean Backscatter Averaging Status SWH Averaging Status, Ocean Backscatter Averaging Status The SWH and Ocean Averaging Status Flags have been set for one or more records.

The SWH and Ocean Averaging Status Flags have been set for one or more records.

## 5.8 L2 Ocean Retracking Quality Check

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

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

Number of products with errors:

49