

### 1. Overview

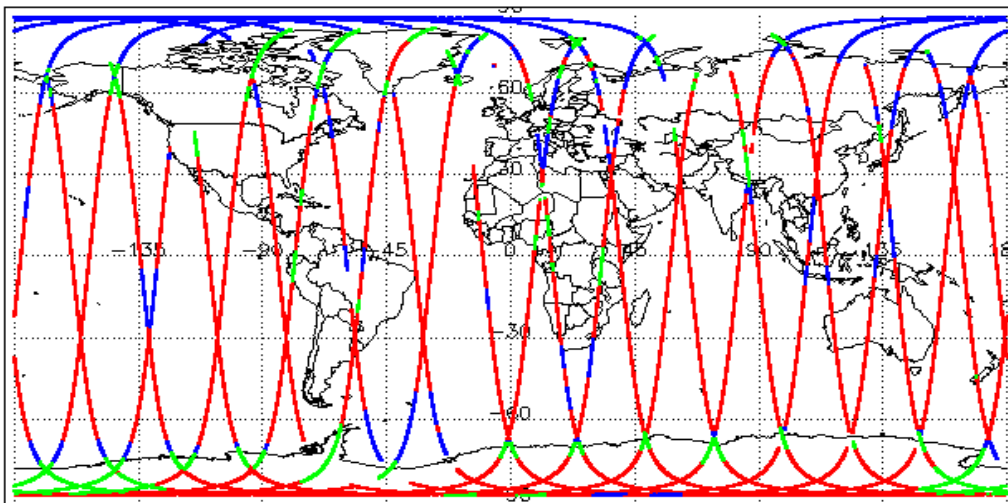
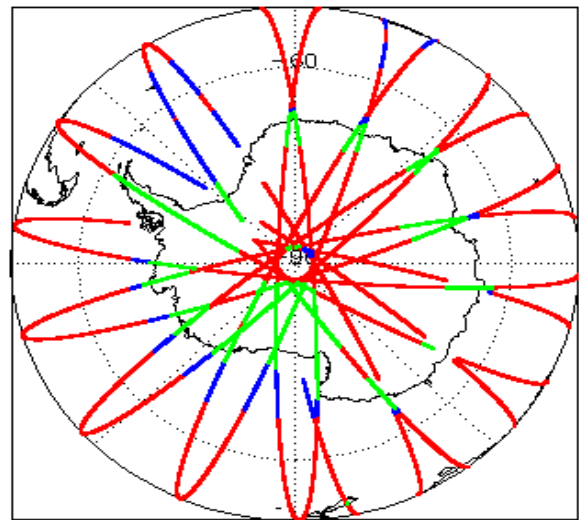
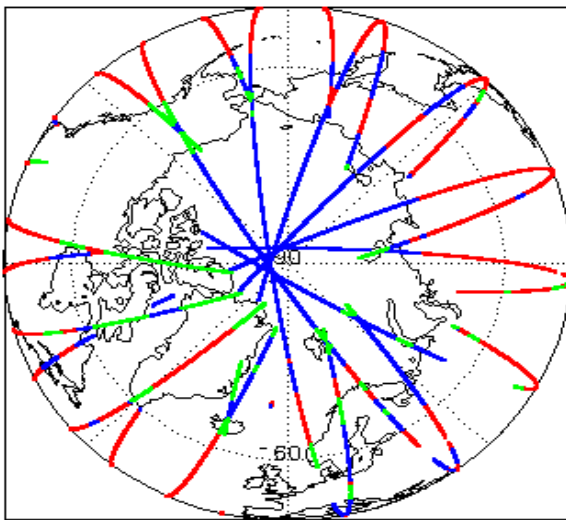
<b>Report Production:</b>	08-Apr-2019
<b>Processor Used:</b>	CryoSat Ocean Processor
<b>Data Used:</b>	Near Real Time Ocean Products (NOP) L1B & L2 Science Data

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	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 / Instrument News

03-Apr-2019	SIRAL unavailability on 03-Apr-2019 from 10:41:49 to 12:28:02 due to a planned orbit manoeuvre.
04-Apr-2019	None
05-Apr-2019	Nothing planned

### 2. Global Coverage



Mode Coverage	
	LRM
	SAR

### 3. Instrument Configuration

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

<b>SIRAL instrument(s) in use:</b>	SIRAL - A
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### 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.

Number of products with errors: 0

### 4.3 L1B 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.

**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: 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: 16

Product	Test Failed	Description
CS_OFFL_SIR_NOPM1B_20190404T122939_20190404T130226_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T142555_20190404T144143_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T163405_20190404T170755_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T231053_20190404T234540_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T013958_20190404T014149_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T023136_20190404T023253_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T081715_20190404T081841_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T103147_20190404T103314_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T221825_20190404T221848_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T012743_20190404T013056_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T041128_20190404T041223_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T071735_20190404T071928_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T085714_20190404T085805_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T104642_20190404T104723_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T153633_20190404T154322_C001	Loss of Echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_NOPM1B_20190404T171456_20190404T172014_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: 76

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190404T000140_20190404T000817_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.



CS_OFFL_SIR_NOPM_2_20190404T173552_20190404T180013_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T180716_20190404T181043_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T181300_20190404T184217_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T191345_20190404T193934_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T194615_20190404T194942_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T195226_20190404T200414_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T200951_20190404T202719_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T204942_20190404T205810_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T211254_20190404T211925_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T212104_20190404T212639_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T213150_20190404T220552_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T221944_20190404T222042_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T223912_20190404T225854_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T231053_20190404T234540_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T081715_20190404T081841_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T090831_20190404T090946_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T094717_20190404T095030_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T193934_20190404T194105_C001	Ice Range Averaging Status	The Ice Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T194942_20190404T195116_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T230535_20190404T230843_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190404T085812_20190404T085827_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190404T100027_20190404T100225_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190404T162036_20190404T162043_C001	Ocean Range Averaging Status	The Ocean Range Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPR_2_20190404T162737_20190404T162744_C001	Ice Range Averaging Status	The Ice 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 set.

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:** 80

Product	Test Failed	Description
CS_OFFL_SIR_NOPM_2_20190404T000140_20190404T000817_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_20190404T000827_20190404T003434_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_20190404T005240_20190404T012358_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_20190404T013331_20190404T013524_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T013817_20190404T013958_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T014200_20190404T015945_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_20190404T020425_20190404T021123_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_20190404T022725_20190404T023136_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T023259_20190404T023547_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_20190404T023633_20190404T024830_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_20190404T025450_20190404T030627_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_20190404T031511_20190404T031932_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T032111_20190404T033613_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_20190404T033753_20190404T034847_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_20190404T041447_20190404T042157_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_20190404T042320_20190404T042808_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_20190404T043100_20190404T044739_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_20190404T045003_20190404T045842_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPM_2_20190404T050046_20190404T052333_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_NOPN_2_20190404T081715_20190404T081841_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_NOPN_2_20190404T090831_20190404T090946_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_NOPN_2_20190404T094717_20190404T095030_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T193934_20190404T194105_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has been set for one or more records.
CS_OFFL_SIR_NOPN_2_20190404T194942_20190404T195116_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_NOPN_2_20190404T230535_20190404T230843_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_NOPR_2_20190404T085812_20190404T085827_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_NOPR_2_20190404T100027_20190404T100225_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_NOPR_2_20190404T162036_20190404T162043_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_NOPR_2_20190404T162737_20190404T162744_C001	Ice Backscatter Averaging Status	The Ice Backscatter Averaging Status Flag has 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:** 57