

### 1. Overview

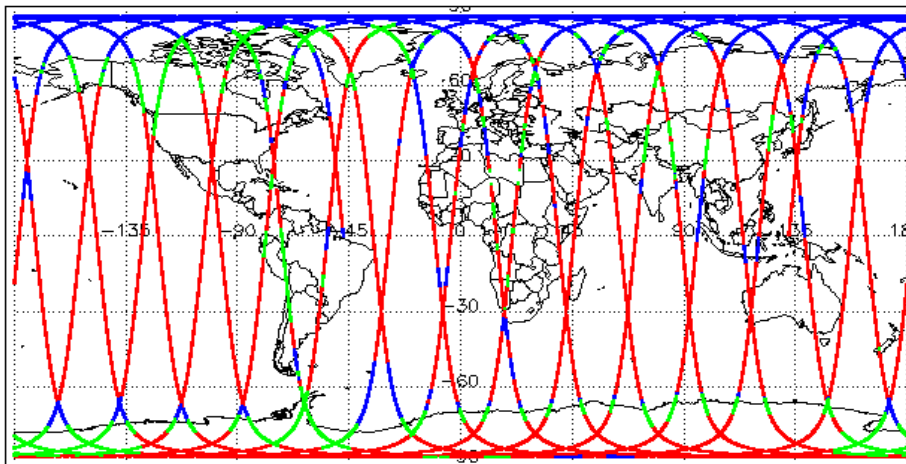
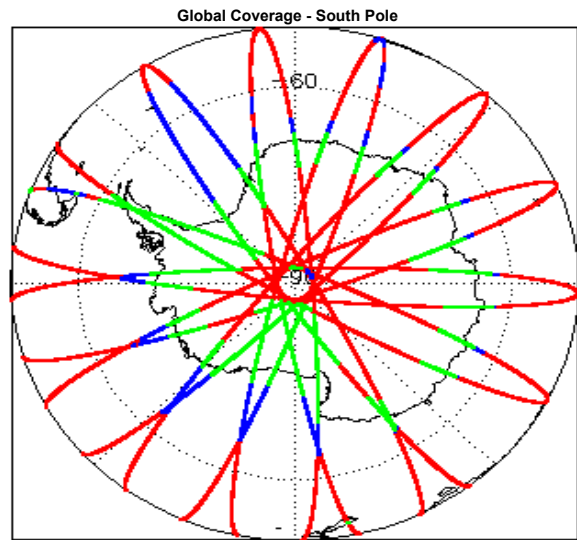
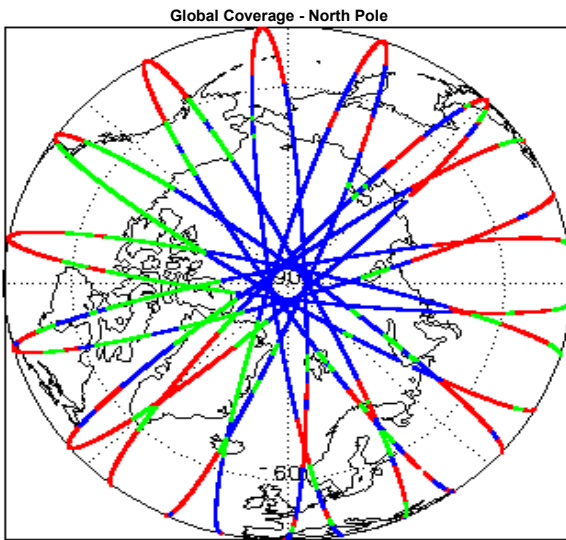
Report Production Date:	26-Feb-2016
Processor Used:	CryoSat Ice Processor
Data Used:	L1B and L2 OFFLINE Data

Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	See Section 4.2 and 5.2
Star Tracker Usage Check	Nominal
L1B Calibration Usage Check	Nominal
L1B & L2 Auxiliary Data File Usage Check	Nominal
L1B & L2 Auxiliary Correction Error Check	Nominal
L1B & L2 Measurement Confidence Data Check	See Section 4.7 and 5.5

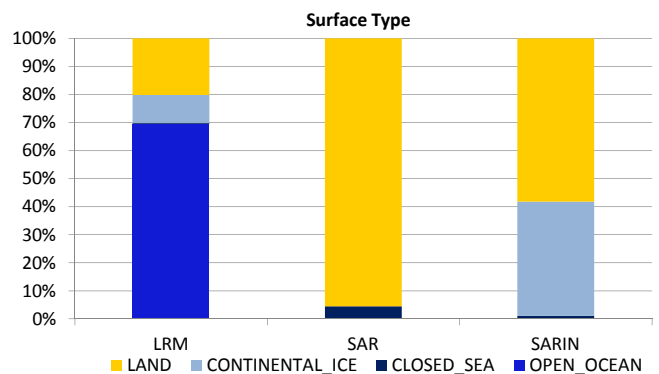
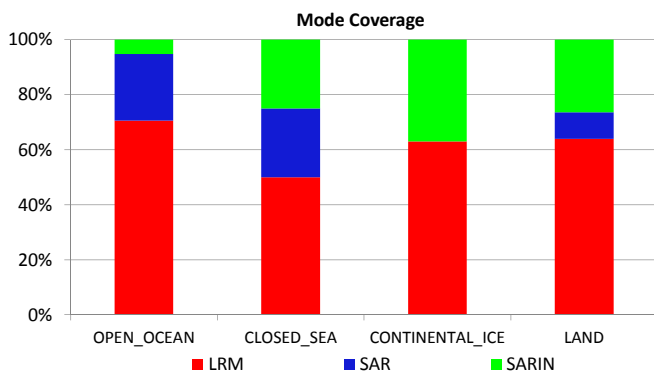
#### Mission / Instrument News

28-Jan-2016	None
29-Jan-2016	None
30-Jan-2016	Nothing planned

### 2. Global Coverage



Mode Coverage (%)		
	LRM	18.5
	SAR	13.3
	SARIn	0.0



### 3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
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## 4. 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 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 carried out 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: 3

Product	Test Failed
CS_OFFL_SIR_SAR_1B_20160129T234427_20160129T234427_C001	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OFFL_SIR_SAR_1B_20160129T132800_20160129T132801_C001	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OFFL_SIR_SAR_1B_20160129T234430_20160129T234430_C001	Percentage of processing errors detected greater than minimum acceptable threshold.

### 4.3 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

Number of products with errors: 0

### 4.4 L1B Calibration Usage Check

Each product is checked in order to ensure that the necessary calibration files have been used in processing.

Number of products with errors: 0

### 4.5 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.

Number of products with errors: 0

### 4.6 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

### 4.7 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 1B products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

**Block Degraded Flag:** This flag is currently set for a number of individual records generally at the start or end of products (all modes), but this is to be expected.

**Phase Perturbation Flag:** This flag is currently set for all L1B SARIn products, indicating that the ADC correction application is deactivated, but this is in line with the current configuration.

Number of products with errors: 4

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20160129T085324_20160129T085350_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20160129T122859_20160129T124036_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20160129T131201_20160129T132258_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo
CS_OFFL_SIR_LRM_1B_20160129T182115_20160129T182207_C001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

## 5. 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 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 carried out 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: 1

Product	Test Failed
CS_OFFL_SIR_SAR_2_20160129T132800_20160129T132801_C001	Percentage of processing errors detected greater than minimum acceptable threshold.

### 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

CryoSat L2 data includes a correction error flag (field 30) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

## 5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

**Currently, there are several common error flags raised in the Level 2 products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.**

**Freeboard error:** This flag is correctly set in all L2 SAR products that are not discriminated as sea-ice, and for which freeboard cannot be calculated.

**Height and Backscatter errors:** These flags are currently set for products over land, but this is to be expected. Retracker 1 Height and Backscatter error flags are also set for products over sea-ice, but this is to be expected.

**Peakiness error:** This flag is currently set for products over sea-ice, but this is to be expected.

**SARin X-Track Angle Error:** This flag is set when the difference between the computed surface elevation and the DEM is >50 m. The DEM is only available over Greenland and Antarctica and as a result this flag is set for L2 SARin products in all other locations as expected.

**SSHA interpolation error:** This flag is currently set for a number of SAR products occurring at surface type boundaries, but this is to be expected.

**Number of products with errors:** 105

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2__20160129T000009_20160129T001243_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T001426_20160129T001646_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T003932_20160129T004903_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T005139_20160129T010613_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T014032_20160129T014346_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T014509_20160129T014858_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T014915_20160129T015221_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T022835_20160129T024527_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T025309_20160129T025446_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T025902_20160129T032457_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T040236_20160129T042501_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T043207_20160129T043532_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T043804_20160129T051046_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T053736_20160129T060439_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T060628_20160129T061438_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T061824_20160129T065213_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T070626_20160129T070714_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T073346_20160129T073451_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T074608_20160129T075127_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T075708_20160129T081936_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T082222_20160129T083151_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T084357_20160129T084443_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T084459_20160129T084758_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T085513_20160129T090020_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T090028_20160129T090832_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T091019_20160129T092159_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T092659_20160129T093027_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T093649_20160129T094223_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T094233_20160129T100819_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T102648_20160129T103348_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T103411_20160129T105806_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T111604_20160129T113245_C001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2__20160129T113316_20160129T113354_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T113819_20160129T114530_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T120701_20160129T122239_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T122859_20160129T124036_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T124624_20160129T124847_C001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2__20160129T125523_20160129T131022_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2__20160129T131201_20160129T132258_C001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records



CS_OFFL_SIR_SIN_2_20160129T133437_20160129T133537_C001	SARIn X-track Angle Error, Surface Model Unavailable	An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records
CS_OFFL_SIR_SIN_2_20160129T133941_20160129T134153_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T142229_20160129T142410_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T143251_20160129T143456_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T151854_20160129T152342_C001	SARIn X-track Angle Error, Surface Model Unavailable	An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records
CS_OFFL_SIR_SIN_2_20160129T160204_20160129T160329_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T160515_20160129T160615_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T161046_20160129T161306_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T174138_20160129T174531_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T175123_20160129T175249_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T183236_20160129T183302_C001	SARIn X-track Angle Error, Surface Model Unavailable	An ambiguous angle was detected for SARIn mode and no DEM or Slope Model was used for one or more records
CS_OFFL_SIR_SIN_2_20160129T192126_20160129T192438_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T192954_20160129T193104_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T205906_20160129T210319_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T210853_20160129T211018_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T214828_20160129T215231_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T223647_20160129T223820_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T224641_20160129T224825_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T232446_20160129T232626_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records
CS_OFFL_SIR_SIN_2_20160129T233032_20160129T233127_C001	SARIn X-track Angle Error	An ambiguous angle was detected for SARIn mode for one or more records