

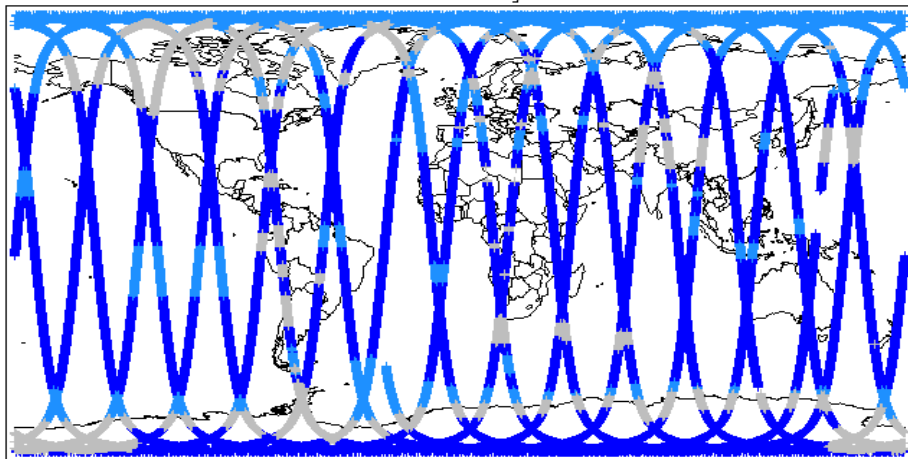
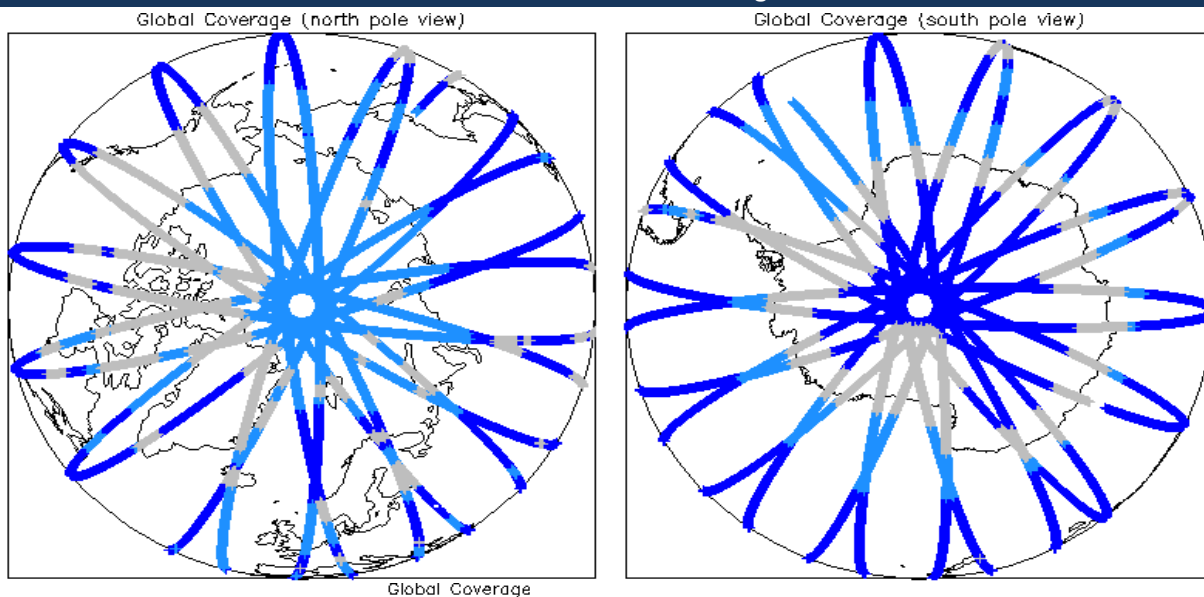
1. Overview

Report Production Date:	17-Jun-2013
Data Used:	OFFLINE L1B and L2 Science Data

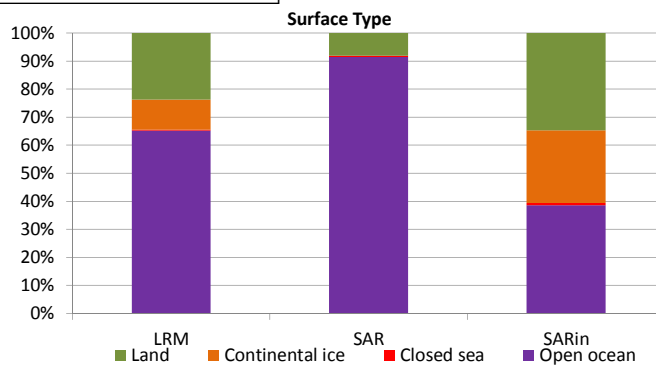
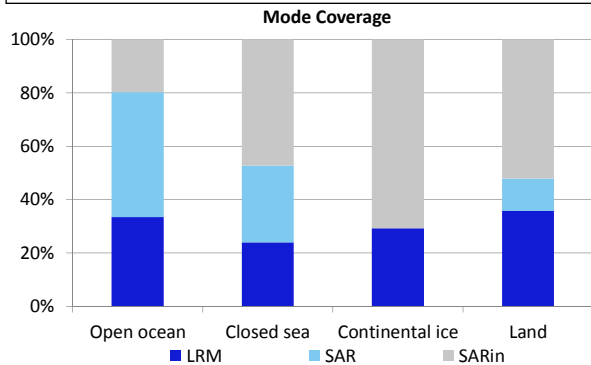
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	See Section 5.3
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement Data Set Check	See Section 4.5

Mission / Instrument News	
14-May-2013	None
15-May-2013	None
16-May-2013	SIRAL unavailability from 16-May-2013 07:15:39 to 08:12:43 due to a planned orbit manoeuvre.

2. Global Coverage



Mode Coverage(%)		
	LRM	67.01
	SAR	18.49
	SIN	14.31



3. Instrument Configuration

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

SIRAL instrument(s) in use:	SIRAL - A
Star Tracker(s) in use:	Star Tracker 2

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: 0

4.3 L1B Auxiliary Data File Usage Check

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

Number of products with errors: 0

4.4 L1B Flagged Auxiliary Correction Error Check

Each product is checked to spot auxiliary corrections flagged by the ground-station processing chain as missing or containing errors

Number of products with errors: 2

Product	Test Failed
CS_OFFL_SIR_LRM_1B_20130515T113935_20130515T120340_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20130515T055548_20130515T060116_B001	Dynamic atmosphere correction error

4.5 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag word (field 14) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 1

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20130515T063408_20130515T063913_B001	TRK echo error	The tracking echo has returned an error

5. Level 2 Data Quality Check

5.1 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

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: 0

5.3 L2 Auxiliary Data File Usage Check

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

Number of products with errors: 1

Product	AUX File	Comment
CS_OFFL_SIR_GDR_2A_20130514T232544_20130515T010457_B001	CS_OPER_AUX_ORBDOR_20130513T215525_20130515T002325_0001	Coverage missing for intervals [2013-05-15T00:23:25, 2013-05-15T01:04:57]

5.4 L2 Flagged Auxiliary Correction Error Check

Each product is checked to spot auxiliary corrections flagged by the ground-station processing chain as missing or containing errors

Number of products with errors: 5

Product	Test Failed
CS_OFFL_SIR_LRM_2_20130514T235943_20130515T000331_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2_20130515T063408_20130515T063913_B001	Error in MSS/Geoid, and Ocean Depth Land Elevation model, correction computations
CS_OFFL_SIR_LRM_2_20130515T113935_20130515T120340_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130515T055548_20130515T060116_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130515T175927_20130515T180313_B001	Dynamic atmosphere correction error

5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag word (field 43) for each 20-Hz measurement record. The bit value of this flag is an assessment of the measurement quality by the ground-segment processing chains

Presently, there are several common data Quality Flag errors raised by the Level 2 products which are either expected due to changes made to the IPF processor in Baseline B or else are due to known issues with the data processors. The investigation of the known issues are on-going and are due to be resolved with the next update of the Level 2 processors. All common known issues are summarised in the list below, followed by a table highlighting any additional issues which may arise from this test.

Freeboard Error: This Quality Flag is correctly set in all products as this parameter is currently not provided in the L2 products and the Freeboard value is presently set to the default value of -9999.

SARin x-track angle error: Currently there is an on-going investigation into the high number of errors from the 'SARin x-track Error' Quality Flag over Antarctica.

Height error and Backscatter error: It has been noted that the number of errors arising from the 'Backscatter Error' and 'Height Error' Quality Flag is much higher than expected over land areas and this is currently part of an on-going investigation by expert teams.

Number of products with errors: 0

6. QCC Check

The QCC is a CryoSat facility that performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Nb. There is currently a discrepancy between the number of QCC reports and the number of products reported. This is a known issue and investigation is on-going.

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_GDR_2A	20	17	0	17	0
SIR_LRM_1B	153	152	131	21	0
SIR_LRM_2	153	152	1	151	0
SIR_SAR_1B	102	109	0	109	0
SIR_SAR_2A	108	109	3	106	0
SIR_SIN_1B	112	115	0	115	0
SIR_SIN_2	115	115	0	115	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 43

Product name
CS_OFFL_SIR_GDR_2A_20130514T232544_20130515T010457_B001
CS_OFFL_SIR_LRM_1B_20130514T235943_20130515T000331_B001
CS_OFFL_SIR_LRM_1B_20130515T130706_20130515T131115_B001
CS_OFFL_SIR_LRM_1B_20130515T131238_20130515T132812_B001
CS_OFFL_SIR_LRM_1B_20130515T133026_20130515T133326_B001
CS_OFFL_SIR_LRM_1B_20130515T133432_20130515T134615_B001
CS_OFFL_SIR_LRM_1B_20130515T135137_20130515T135426_B001
CS_OFFL_SIR_LRM_1B_20130515T135454_20130515T135918_B001
CS_OFFL_SIR_LRM_1B_20130515T140145_20130515T141600_B001
CS_OFFL_SIR_LRM_1B_20130515T141740_20130515T143920_B001
CS_OFFL_SIR_LRM_1B_20130515T145149_20130515T145306_B001
CS_OFFL_SIR_LRM_1B_20130515T145428_20130515T150138_B001
CS_OFFL_SIR_LRM_1B_20130515T150302_20130515T150812_B001
CS_OFFL_SIR_LRM_1B_20130515T151006_20130515T152641_B001
CS_OFFL_SIR_LRM_2_20130514T235943_20130515T000331_B001
CS_OFFL_SIR_LRM_2_20130515T130706_20130515T131115_B001
CS_OFFL_SIR_LRM_2_20130515T131238_20130515T132812_B001
CS_OFFL_SIR_LRM_2_20130515T133026_20130515T133326_B001
CS_OFFL_SIR_LRM_2_20130515T133432_20130515T134615_B001
CS_OFFL_SIR_LRM_2_20130515T135137_20130515T135426_B001
CS_OFFL_SIR_LRM_2_20130515T135454_20130515T135918_B001
CS_OFFL_SIR_LRM_2_20130515T140145_20130515T141600_B001
CS_OFFL_SIR_LRM_2_20130515T141740_20130515T143920_B001
CS_OFFL_SIR_LRM_2_20130515T145149_20130515T145306_B001
CS_OFFL_SIR_LRM_2_20130515T145428_20130515T150138_B001
CS_OFFL_SIR_LRM_2_20130515T150302_20130515T150812_B001
CS_OFFL_SIR_LRM_2_20130515T151006_20130515T152641_B001
CS_OFFL_SIR_SAR_1B_20130515T112105_20130515T112711_B001
CS_OFFL_SIR_SAR_2A_20130515T112105_20130515T112711_B001
CS_OFFL_SIR_SIN_1B_20130515T130546_20130515T130706_B001
CS_OFFL_SIR_SIN_1B_20130515T131116_20130515T131231_B001
CS_OFFL_SIR_SIN_1B_20130515T133327_20130515T133432_B001
CS_OFFL_SIR_SIN_1B_20130515T134615_20130515T135137_B001
CS_OFFL_SIR_SIN_1B_20130515T135426_20130515T135453_B001
CS_OFFL_SIR_SIN_1B_20130515T135918_20130515T140057_B001
CS_OFFL_SIR_SIN_1B_20130515T144018_20130515T144109_B001
CS_OFFL_SIR_SIN_2_20130515T130546_20130515T130706_B001
CS_OFFL_SIR_SIN_2_20130515T131116_20130515T131231_B001
CS_OFFL_SIR_SIN_2_20130515T133327_20130515T133432_B001
CS_OFFL_SIR_SIN_2_20130515T134615_20130515T135137_B001
CS_OFFL_SIR_SIN_2_20130515T135426_20130515T135453_B001
CS_OFFL_SIR_SIN_2_20130515T135918_20130515T140057_B001
CS_OFFL_SIR_SIN_2_20130515T144018_20130515T144109_B001