

1. Overview

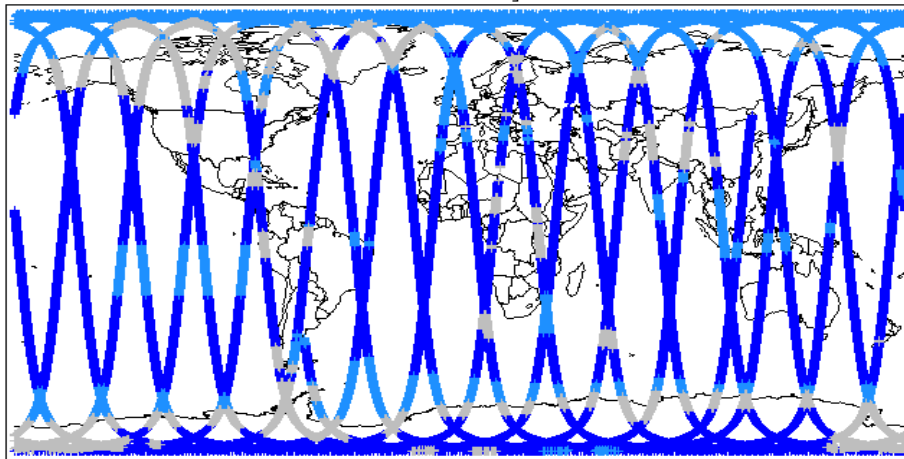
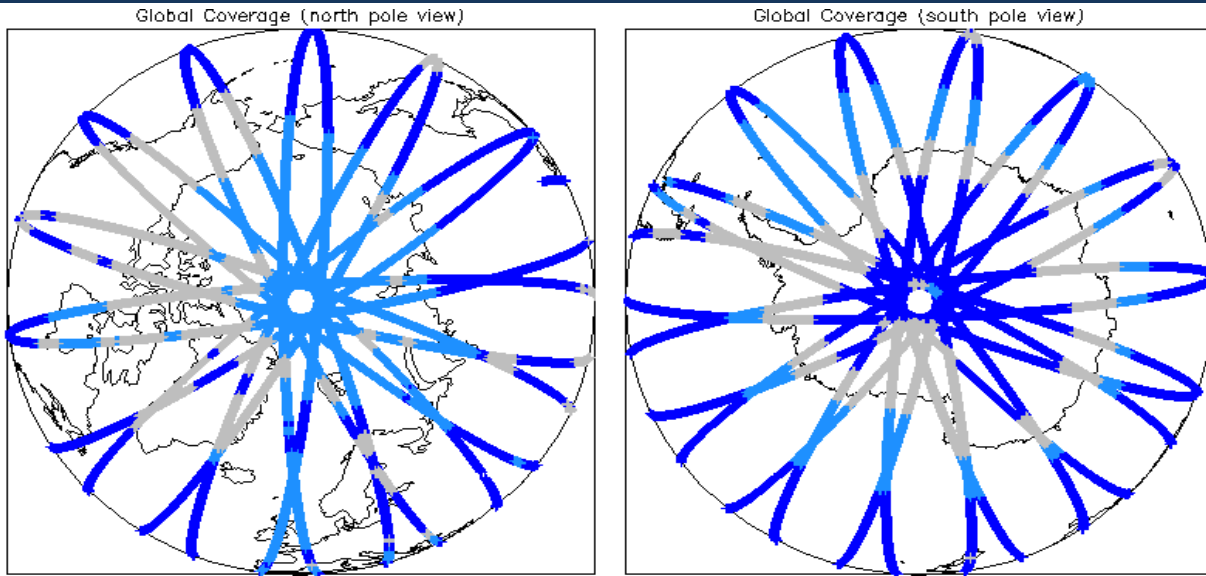
Report Production Date:	02-Aug-2013
Data Used:	OFFLINE L1B and L2 Science Data

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 and 5.5

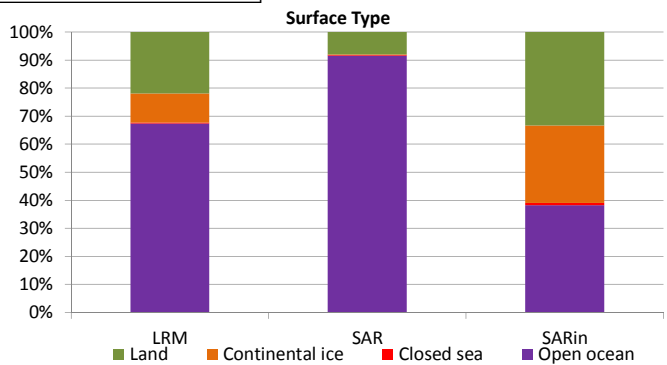
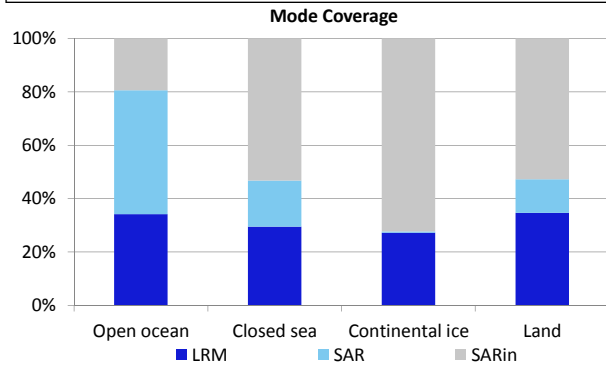
Mission / Instrument News

26-Jun-2013	None
27-Jun-2013	None
28-Jun-2013	Nothing planned

2. Global Coverage



Mode Coverage(%)		
	LRM	65.80
	SAR	19.79
	SARin	14.24



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 1

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: 3

Product	Test Failed
CS_OFFL_SIR_LRM_1B_20130626T235244_20130627T001327_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20130627T054231_20130627T061529_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20130627T115858_20130627T120136_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: 13

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20130627T004918_20130627T005916_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130627T021227_20130627T021609_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130627T035009_20130627T035523_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130627T052107_20130627T052647_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130627T104015_20130627T105521_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130627T174635_20130627T175047_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130627T221807_20130627T223032_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SAR_1B_20130627T051655_20130627T052107_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SAR_1B_20130627T105522_20130627T105724_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SAR_1B_20130627T223032_20130627T223159_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20130627T005917_20130627T010201_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20130627T020910_20130627T021227_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20130627T034832_20130627T035009_B001	Attitude correction missing	The attitude has not been corrected

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_20130626T232246_20130627T010200_B001	CS_OPER_AUX_ORBDOR_20130625T215525_20130627T002325_0001	Coverage missing for intervals [2013-06-27T00:23:25, 2013-06-27T01:02:00]

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: 4

Product	Test Failed
CS_OFFL_SIR_LRM_2_20130626T235244_20130627T001327_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2_20130627T054231_20130627T061529_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130627T115858_20130627T120135_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130627T175623_20130627T180020_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: 3

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2_20130627T021227_20130627T021609_B001	Calibration warning	The Cal correction is missing or has been taken from the IPFDB as opposed to the Calibration products
CS_OFFL_SIR_LRM_2_20130627T035009_20130627T035523_B001	Calibration warning	The Cal correction is missing or has been taken from the IPFDB as opposed to the Calibration products
CS_OFFL_SIR_LRM_2_20130627T052107_20130627T052647_B001	Calibration warning	The Cal correction is missing or has been taken from the IPFDB as opposed to the Calibration products

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	35	32	0	32	0
SIR_LRM_1B	131	141	141	0	0
SIR_LRM_2	142	141	1	140	0
SIR_SAR_1B	101	116	0	116	0
SIR_SAR_2A	112	119	4	115	0
SIR_SIN_1B	110	122	0	122	0
SIR_SIN_2	116	122	0	122	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 18

Product name
CS_OFFL_SIR_GDR_2A_20130626T232246_20130627T010200_B001
CS_OFFL_SIR_GDR_2A_20130627T010200_20130627T024113_B001
CS_OFFL_SIR_GDR_2A_20130627T024113_20130627T042027_B001
CS_OFFL_SIR_GDR_2A_20130627T042027_20130627T055941_B001
CS_OFFL_SIR_GDR_2A_20130627T055941_20130627T073854_B001
CS_OFFL_SIR_GDR_2A_20130627T073854_20130627T091808_B001
CS_OFFL_SIR_GDR_2A_20130627T091808_20130627T105721_B001
CS_OFFL_SIR_GDR_2A_20130627T105721_20130627T123635_B001
CS_OFFL_SIR_GDR_2A_20130627T123635_20130627T141548_B001
CS_OFFL_SIR_GDR_2A_20130627T141548_20130627T155502_B001
CS_OFFL_SIR_LRM_1B_20130626T235244_20130627T001327_B001
CS_OFFL_SIR_LRM_2_20130626T235244_20130627T001327_B001
CS_OFFL_SIR_LRM_2_20130627T232338_20130627T233815_B001
CS_OFFL_SIR_SAR_2A_20130627T235029_20130627T235234_B001
CS_OFFL_SIR_SAR_2A_20130627T235848_20130628T000014_B001
CS_OFFL_SIR_SIN_1B_20130627T233920_20130627T234103_B001
CS_OFFL_SIR_SIN_2_20130627T092602_20130627T092951_B001
CS_OFFL_SIR_SIN_2_20130627T233920_20130627T234103_B001