

1. Overview

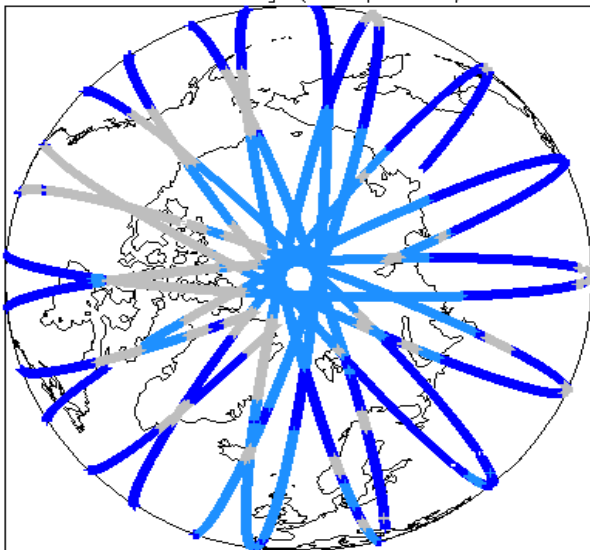
Report Production Date:	20-May-2013
Data Used:	OFFLINE L1B and L2 Science Data

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

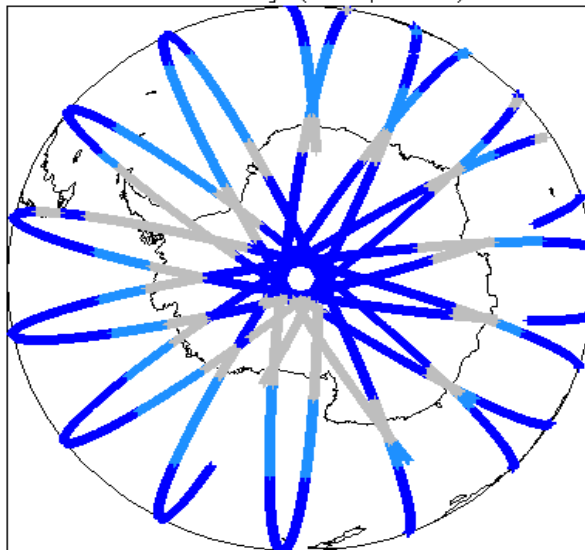
Mission / Instrument News	
19-Aug-2012	None
20-Aug-2012	None
21-Aug-2012	SIRAL unavailability from 21-Aug-2012 ~05:59:49 to ~17:47:00 due to planned DORIS restart activities.

2. Global Coverage

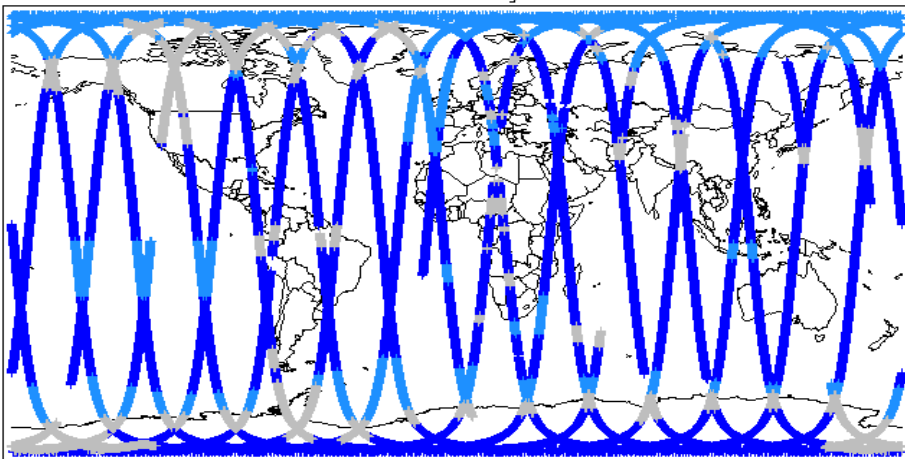
Global Coverage (north pole view)



Global Coverage (south pole view)



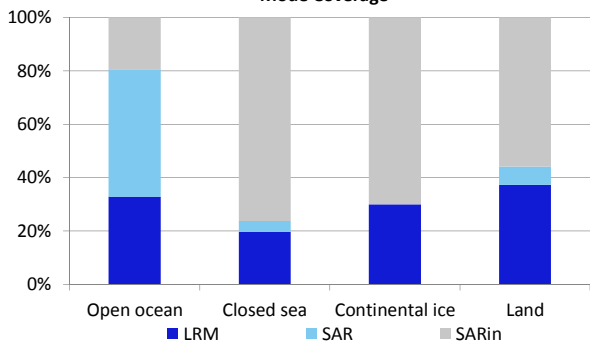
Global Coverage



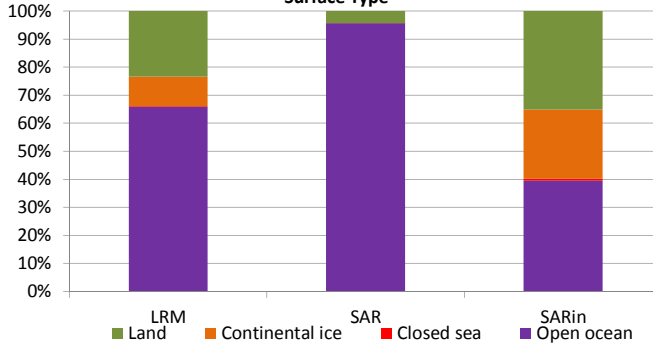
Mode Coverage(%)

	LRM	65.12
	SAR	20.57
	SARin	14.16

Mode Coverage



Surface Type



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 L1 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_20120820T055008_20120820T060109_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20120820T174948_20120820T180039_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20120820T115355_20120820T120146_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: 3

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120820T052552_20120820T053827_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120820T134002_20120820T134955_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120820T163533_20120820T164546_B001	TRK echo error	The tracking echo has returned an error

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 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 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_20120820T230512_20120821T004425_B001	CS_OPER_AUX_ORBDOR_20120819T215525_20120821T002325_0001.EEF	Coverage missing for intervals [2012-08-21T00:23:25, 2012-08-21T00:44:25]

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: 2

Product	Test Failed
CS_OFFL_SIR_LRM_2_20120820T055008_20120820T060109_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2_20120820T174948_20120820T180039_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	33	33	0	33	0
SIR_LRM_1B	103	116	102	14	0
SIR_LRM_2	113	118	0	118	0
SIR_SAR_1B	80	73	0	73	0
SIR_SAR_2A	75	86	3	83	0
SIR_SIN_1B	95	94	0	94	0
SIR_SIN_2	92	101	0	101	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 39

Product name
CS_OFFL_SIR_GDR_2A_20120819T235602_20120820T013515_B001
CS_OFFL_SIR_GDR_2A_20120820T013515_20120820T031429_B001
CS_OFFL_SIR_GDR_2A_20120820T113037_20120820T130950_B001
CS_OFFL_SIR_LRM_1B_20120819T233858_20120820T000343_B001
CS_OFFL_SIR_LRM_1B_20120820T002528_20120820T002617_B001
CS_OFFL_SIR_LRM_1B_20120820T014445_20120820T015416_B001
CS_OFFL_SIR_LRM_1B_20120820T094700_20120820T095141_B001
CS_OFFL_SIR_LRM_1B_20120820T100240_20120820T100258_B001
CS_OFFL_SIR_LRM_1B_20120820T100400_20120820T100404_B001
CS_OFFL_SIR_LRM_1B_20120820T184636_20120820T184703_B001
CS_OFFL_SIR_LRM_1B_20120820T191627_20120820T192513_B001
CS_OFFL_SIR_LRM_1B_20120820T212509_20120820T214151_B001
CS_OFFL_SIR_LRM_2_20120819T233858_20120820T000343_B001
CS_OFFL_SIR_LRM_2_20120820T043730_20120820T050050_B001
CS_OFFL_SIR_LRM_2_20120820T095520_20120820T095706_B001
CS_OFFL_SIR_LRM_2_20120820T135136_20120820T141615_B001
CS_OFFL_SIR_LRM_2_20120820T151902_20120820T153945_B001
CS_OFFL_SIR_SAR_1B_20120820T005928_20120820T010625_B001
CS_OFFL_SIR_SAR_1B_20120820T024030_20120820T024142_B001
CS_OFFL_SIR_SAR_1B_20120820T043557_20120820T043730_B001
CS_OFFL_SIR_SAR_1B_20120820T091827_20120820T092241_B001
CS_OFFL_SIR_SAR_1B_20120820T123645_20120820T123805_B001
CS_OFFL_SIR_SAR_1B_20120820T141615_20120820T141709_B001
CS_OFFL_SIR_SAR_1B_20120820T150811_20120820T150953_B001
CS_OFFL_SIR_SAR_1B_20120820T153945_20120820T154124_B001
CS_OFFL_SIR_SAR_1B_20120820T180039_20120820T180642_B001
CS_OFFL_SIR_SAR_1B_20120820T191302_20120820T191450_B001
CS_OFFL_SIR_SAR_1B_20120820T192639_20120820T192905_B001
CS_OFFL_SIR_SAR_1B_20120820T204312_20120820T204724_B001
CS_OFFL_SIR_SIN_1B_20120820T064108_20120820T064250_B001
CS_OFFL_SIR_SIN_1B_20120820T065501_20120820T065524_B001
CS_OFFL_SIR_SIN_1B_20120820T095141_20120820T095205_B001
CS_OFFL_SIR_SIN_1B_20120820T115100_20120820T115355_B001
CS_OFFL_SIR_SIN_1B_20120820T123805_20120820T124001_B001
CS_OFFL_SIR_SIN_1B_20120820T165055_20120820T165151_B001
CS_OFFL_SIR_SIN_1B_20120820T191450_20120820T191627_B001
CS_OFFL_SIR_SIN_1B_20120820T221708_20120820T221715_B001
CS_OFFL_SIR_SIN_2_20120820T002722_20120820T002800_B001
CS_OFFL_SIR_SIN_2_20120820T022400_20120820T022613_B001