

1. Overview

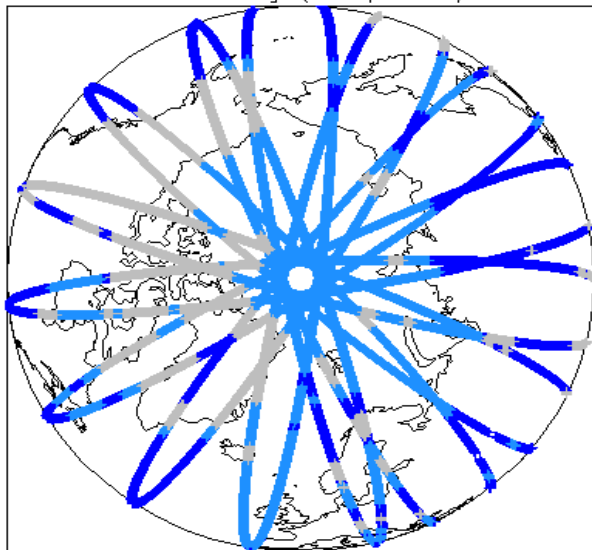
Report Production Date:	09-Apr-2013
Data Used:	OFFLINE L1B and L2 Science Data

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

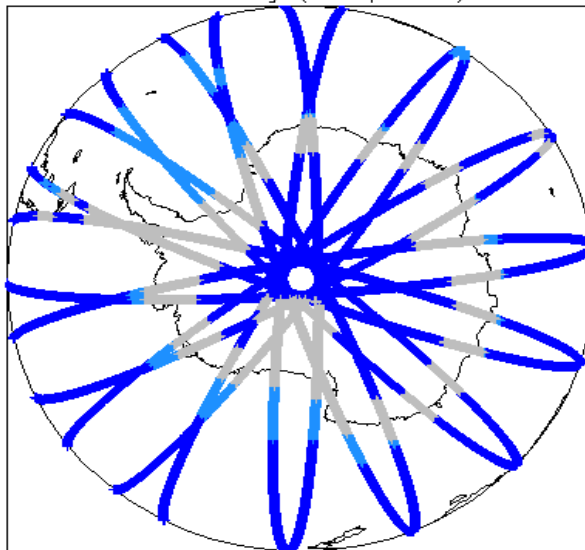
Mission / Instrument News	
08-Mar-2013	None
09-Mar-2013	None
10-Mar-2013	Nothing planned

2. Global Coverage

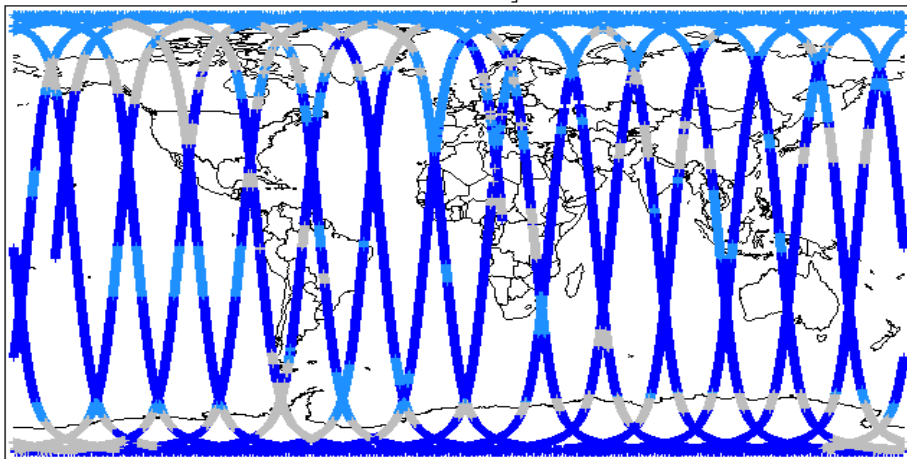
Global Coverage (north pole view)



Global Coverage (south pole view)



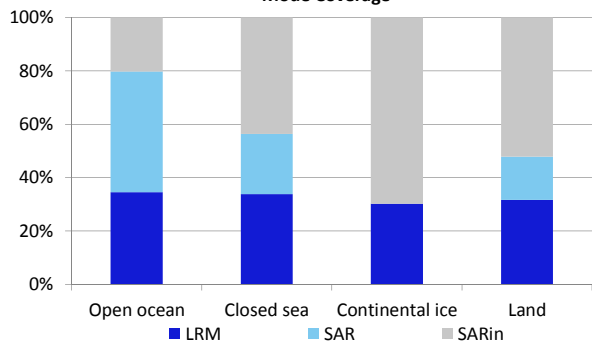
Global Coverage



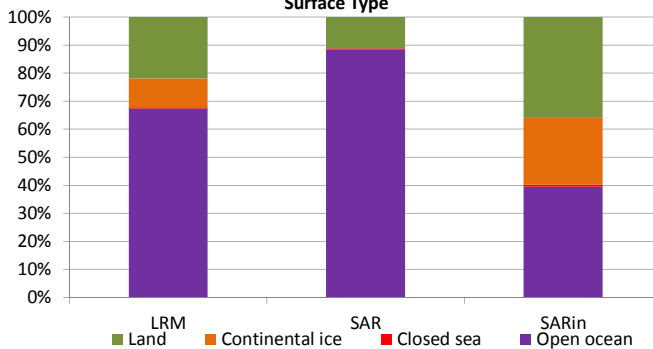
Mode Coverage

Mode Coverage(%)

	LRM	66.02
	SAR	19.75
	SARin	14.06



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 1 & 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: 4

Product	Test Failed
CS_OFFL_SIR_LRM_1B_20130308T235819_20130309T000011_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20130309T054802_20130309T060250_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20130309T175144_20130309T180644_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20130309T115141_20130309T120142_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: 4

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20130309T161229_20130309T162814_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20130309T231922_20130309T232229_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_SAR_1B_20130309T162815_20130309T163017_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20130309T231905_20130309T231921_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: 2

Product	AUX File	Comment
CS_OFFL_SIR_GDR_2A_20130308T235800_20130309T013713_B001	CS_OPER_AUX_ORBDOR_20130307T215525_20130309T002325_0001	Coverage missing for intervals [2013-03-09T00:23:25, 2013-03-09T01:37:13]
CS_OFFL_SIR_GDR_2A_20130309T230710_20130310T004623_B001	CS_OPER_AUX_ORBDOR_20130308T215525_20130310T002325_0001	Coverage missing for intervals [2013-03-10T00:23:25, 2013-03-10T00:46:23]

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_20130308T235819_20130309T000011_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2_20130309T054802_20130309T060250_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2_20130309T175144_20130309T180644_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130309T115141_20130309T120142_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	164	163	163	0	0
SIR_LRM_2	162	161	1	160	0
SIR_SAR_1B	165	165	0	165	0
SIR_SAR_2A	115	115	8	107	0
SIR_SIN_1B	122	122	0	122	0
SIR_SIN_2	118	118	0	118	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 50

Product name
CS_OFFL_SIR_GDR_2A_20130308T235800_20130309T013713_B001
CS_OFFL_SIR_LRM_1B_20130308T235819_20130309T000011_B001
CS_OFFL_SIR_LRM_1B_20130309T184518_20130309T185229_B001
CS_OFFL_SIR_LRM_1B_20130309T185352_20130309T190026_B001
CS_OFFL_SIR_LRM_1B_20130309T190556_20130309T191807_B001
CS_OFFL_SIR_LRM_1B_20130309T192029_20130309T192854_B001
CS_OFFL_SIR_LRM_1B_20130309T193103_20130309T195056_B001
CS_OFFL_SIR_LRM_1B_20130309T195127_20130309T195708_B001
CS_OFFL_SIR_LRM_1B_20130309T200041_20130309T200514_B001
CS_OFFL_SIR_LRM_1B_20130309T200637_20130309T200653_B001
CS_OFFL_SIR_LRM_1B_20130309T202016_20130309T202100_B001
CS_OFFL_SIR_LRM_2_20130308T235819_20130309T000011_B001
CS_OFFL_SIR_LRM_2_20130309T184518_20130309T185229_B001
CS_OFFL_SIR_LRM_2_20130309T185352_20130309T190026_B001
CS_OFFL_SIR_LRM_2_20130309T190556_20130309T191807_B001
CS_OFFL_SIR_LRM_2_20130309T192029_20130309T192854_B001
CS_OFFL_SIR_LRM_2_20130309T193103_20130309T195056_B001
CS_OFFL_SIR_LRM_2_20130309T195127_20130309T195708_B001
CS_OFFL_SIR_LRM_2_20130309T200041_20130309T200514_B001
CS_OFFL_SIR_LRM_2_20130309T200637_20130309T200653_B001
CS_OFFL_SIR_SAR_1B_20130309T180644_20130309T181410_B001
CS_OFFL_SIR_SAR_1B_20130309T182946_20130309T183558_B001
CS_OFFL_SIR_SAR_1B_20130309T190027_20130309T190556_B001
CS_OFFL_SIR_SAR_2A_20130309T180644_20130309T181410_B001
CS_OFFL_SIR_SAR_2A_20130309T182946_20130309T183557_B001
CS_OFFL_SIR_SAR_2A_20130309T190027_20130309T190556_B001
CS_OFFL_SIR_SIN_1B_20130309T151742_20130309T152200_B001
CS_OFFL_SIR_SIN_1B_20130309T165636_20130309T165749_B001
CS_OFFL_SIR_SIN_1B_20130309T165929_20130309T170157_B001
CS_OFFL_SIR_SIN_1B_20130309T171901_20130309T172115_B001
CS_OFFL_SIR_SIN_1B_20130309T173419_20130309T173520_B001
CS_OFFL_SIR_SIN_1B_20130309T173624_20130309T174205_B001
CS_OFFL_SIR_SIN_1B_20130309T174518_20130309T174524_B001
CS_OFFL_SIR_SIN_1B_20130309T174956_20130309T175141_B001
CS_OFFL_SIR_SIN_1B_20130309T181643_20130309T181850_B001
CS_OFFL_SIR_SIN_1B_20130309T182531_20130309T182534_B001
CS_OFFL_SIR_SIN_1B_20130309T183558_20130309T183732_B001
CS_OFFL_SIR_SIN_1B_20130309T184354_20130309T184517_B001
CS_OFFL_SIR_SIN_2_20130309T151742_20130309T152200_B001
CS_OFFL_SIR_SIN_2_20130309T165636_20130309T165749_B001
CS_OFFL_SIR_SIN_2_20130309T165929_20130309T170157_B001
CS_OFFL_SIR_SIN_2_20130309T171901_20130309T172115_B001
CS_OFFL_SIR_SIN_2_20130309T173419_20130309T173519_B001
CS_OFFL_SIR_SIN_2_20130309T173624_20130309T174205_B001
CS_OFFL_SIR_SIN_2_20130309T174518_20130309T174524_B001
CS_OFFL_SIR_SIN_2_20130309T174956_20130309T175140_B001
CS_OFFL_SIR_SIN_2_20130309T181643_20130309T181850_B001
CS_OFFL_SIR_SIN_2_20130309T182531_20130309T182534_B001
CS_OFFL_SIR_SIN_2_20130309T183558_20130309T183732_B001
CS_OFFL_SIR_SIN_2_20130309T184354_20130309T184517_B001