1. Overview

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	Nominal
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement Data Set Check	Nominal

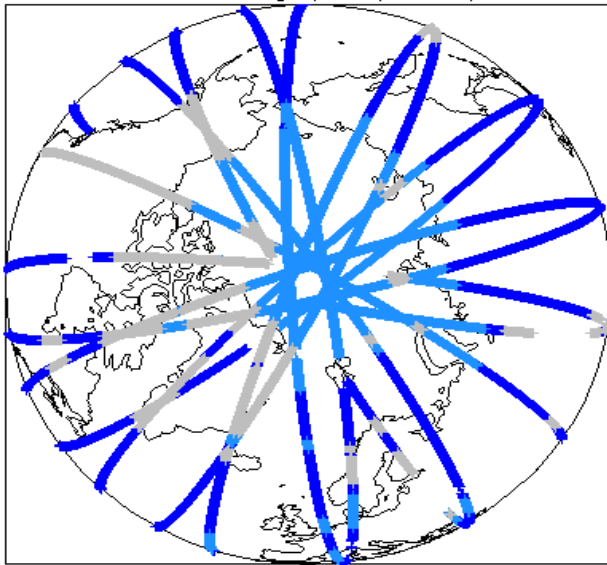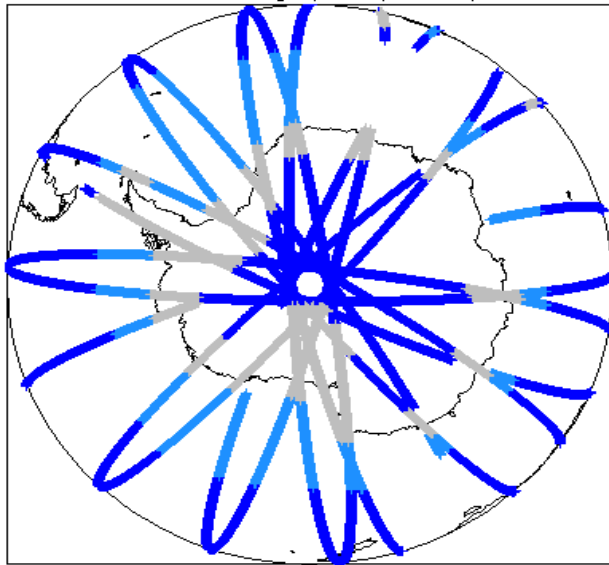|	
Report Production Date:	14-May-2013
Data Used:	OFFLINE L1B and L2 Science Data

Mission / Instrument News

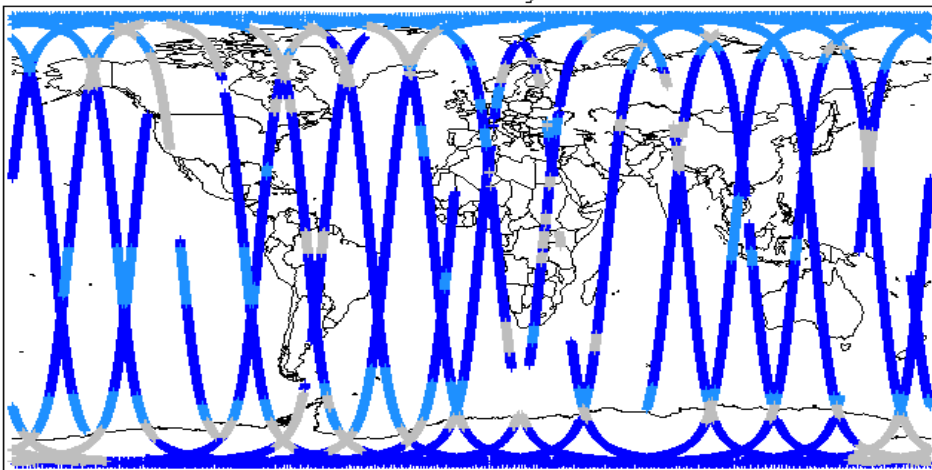|	
12-Aug-2012	None
13-Aug-2012	SIRAL unavailability from 13-Aug-2012 06:16:33 to 08:07:02 due to a planned orbit maintenance manoeuvre
14-Aug-2012	Nothing planned

2. Global Coverage

Global Coverage (north pole view)

Global Coverage (south pole view)

Global Coverage

Mode Coverage(%)

	LRM	68.60
	SAR	18.39
	SIN	12.84

Mode Coverage

LRM   SAR   SARin

Open ocean   Closed sea   Continental ice   Land

Surface Type

Land   Continental ice   Closed sea   Open ocean

LRM   SAR   SARin
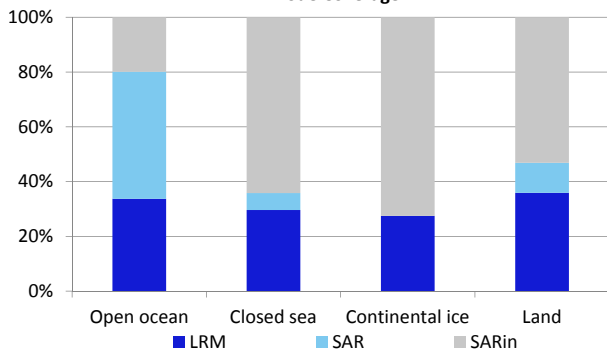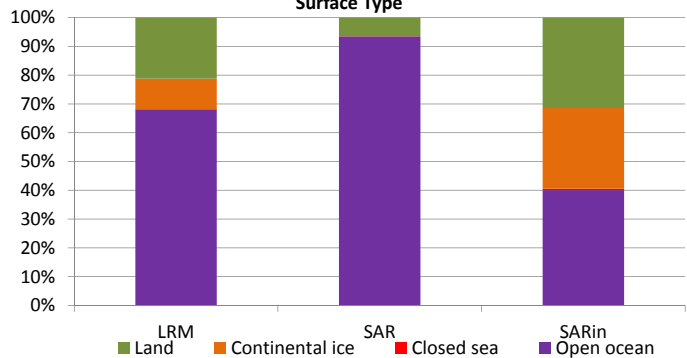
3. Instrument Configuration

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 Auxilary 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_20120813T175556_20120813T180322_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_1B_20120813T055922_20120813T060159_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_1B_20120813T115810_20120813T120230_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: 0

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: 0

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: 3

Product	Test Failed
CS_OFFL_SIR_LRM_2__20120813T175556_20120813T180322_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_2__20120813T055922_20120813T060159_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_2__20120813T115810_20120813T120230_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	30	27	0	27	0
SIR_LRM_1B	108	109	101	8	0
SIR_LRM_2	101	104	1	103	0
SIR_SAR_1B	80	80	0	80	0
SIR_SAR_2A	72	77	2	75	0
SIR_SIN_1B	88	88	0	88	0
SIR_SIN_2	77	86	0	86	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 20

Product name
CS_OFFL_SIR_GDR_2A_20120812T231457_20120813T005410_B001
CS_OFFL_SIR_GDR_2A_20120813T154712_20120813T172626_B001
CS_OFFL_SIR_LRM_1B_20120812T235456_20120813T000802_B001
CS_OFFL_SIR_LRM_1B_20120813T020643_20120813T020902_B001
CS_OFFL_SIR_LRM_2__20120812T235456_20120813T000802_B001
CS_OFFL_SIR_LRM_2__20120813T033834_20120813T033906_B001
CS_OFFL_SIR_LRM_2__20120813T041720_20120813T043103_B001
CS_OFFL_SIR_LRM_2__20120813T124700_20120813T124719_B001
CS_OFFL_SIR_LRM_2__20120813T220722_20120813T224220_B001
CS_OFFL_SIR_SAR_1B_20120813T035448_20120813T035556_B001
CS_OFFL_SIR_SAR_2A_20120813T043455_20120813T043915_B001
CS_OFFL_SIR_SAR_2A_20120813T082130_20120813T082732_B001
CS_OFFL_SIR_SAR_2A_20120813T111213_20120813T111949_B001
CS_OFFL_SIR_SAR_2A_20120813T202459_20120813T202755_B001
CS_OFFL_SIR_SIN_1B_20120813T033932_20120813T034523_B001
CS_OFFL_SIR_SIN_1B_20120813T210125_20120813T210436_B001
CS_OFFL_SIR_SIN_2__20120813T002955_20120813T003500_B001
CS_OFFL_SIR_SIN_2__20120813T020433_20120813T020642_B001
CS_OFFL_SIR_SIN_2__20120813T102919_20120813T103034_B001
CS_OFFL_SIR_SIN_2__20120813T165418_20120813T165634_B001