

1. Overview

Report Production Date:	02-Apr-2014
Data Used:	OFFLINE L1B and L2 Science Data

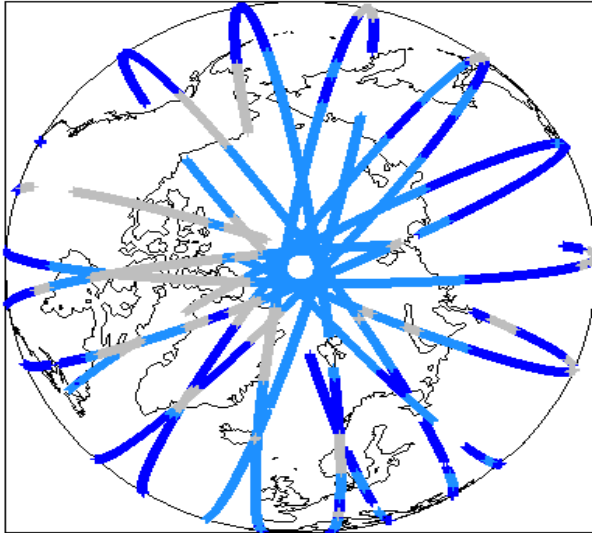
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	Nominal
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement Data Set Check	See Section 4.5 and 5.5

Mission / Instrument News

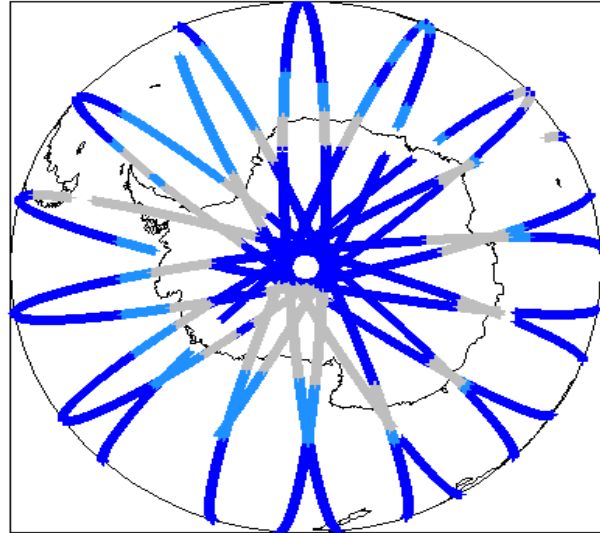
22-May-2012	None
23-May-2012	None
24-May-2012	Nothing planned

2. Global Coverage

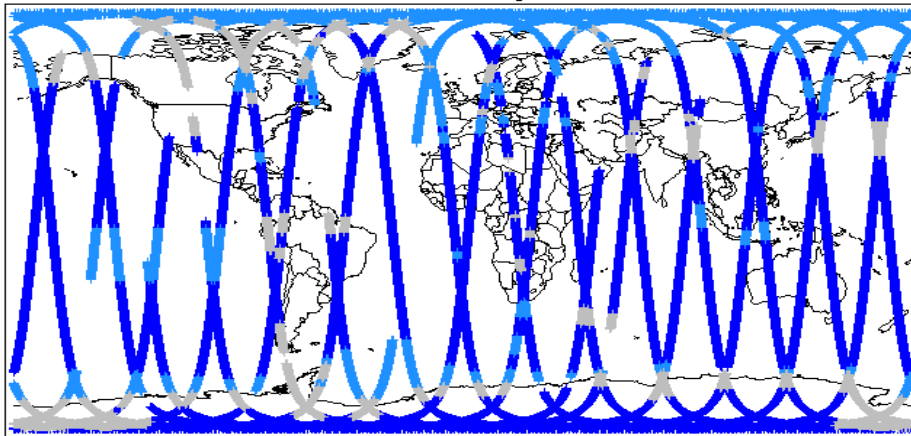
Global Coverage (north pole view)



Global Coverage (south pole view)



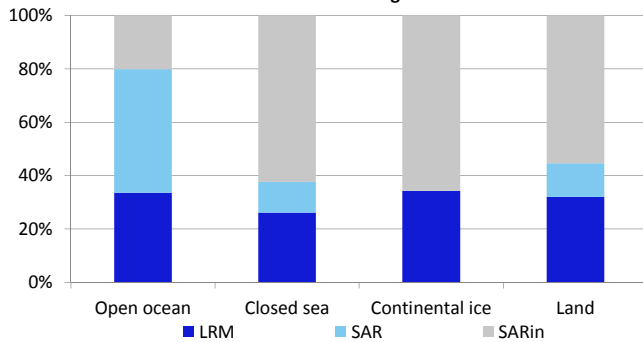
Global Coverage



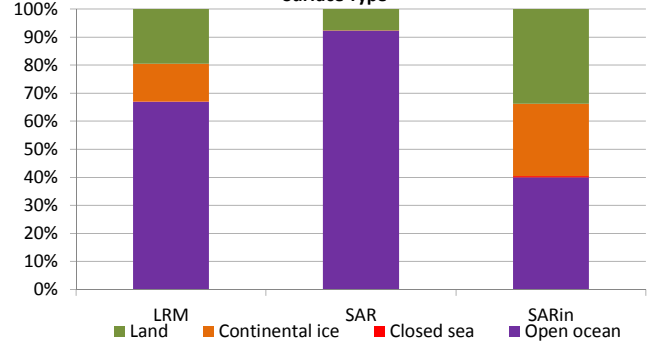
Mode Coverage (%)

	LRM	67.66
	SAR	19.03
	SARin	13.17

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 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: 4

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120522T234702_20120523T001526_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).
CS_OFFL_SIR_LRM_1B_20120523T055110_20120523T060033_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).
CS_OFFL_SIR_LRM_1B_20120523T175738_20120523T180002_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).
CS_OFFL_SIR_SAR_1B_20120523T115743_20120523T120012_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).

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: 2

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120523T030709_20120523T030713_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_SIN_1B_20120523T030536_20120523T030709_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 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	Description
CS_OFFL_SIR_LRM_2_20120522T234702_20120523T001526_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).
CS_OFFL_SIR_LRM_2_20120523T055110_20120523T060033_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).
CS_OFFL_SIR_SAR_2A_20120523T115743_20120523T120012_B001	Dynamic atmosphere correction error	Due to a configuration issue with the handling of Auxiliary Files, products crossing a 6h time boundary are missing the Dynamic Atmospheric correction (CRYO-IDE-161).

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: 1

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2A_20120523T094244_20120523T094538_B001	Peakiness error	There is an error in the peakiness derivation

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	46	44	0	44	0
SIR_LRM_1B	100	117	89	28	0
SIR_LRM_2	103	108	0	108	0
SIR_SAR_1B	84	89	0	89	0
SIR_SAR_2A	75	93	4	89	0
SIR_SIN_1B	91	84	0	84	0
SIR_SIN_2	77	90	0	90	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 58

Product name
CS_OFFL_SIR_GDR_2A_20120522T231549_20120523T005502_B001
CS_OFFL_SIR_GDR_2A_20120523T005502_20120523T023416_B001
CS_OFFL_SIR_GDR_2A_20120523T055243_20120523T073156_B001
CS_OFFL_SIR_GDR_2A_20120523T154805_20120523T172718_B001
CS_OFFL_SIR_GDR_2A_20120523T172718_20120523T190632_B001
CS_OFFL_SIR_LRM_1B_20120522T234702_20120523T001526_B001
CS_OFFL_SIR_LRM_1B_20120523T080538_20120523T080728_B001
CS_OFFL_SIR_LRM_1B_20120523T130322_20120523T131956_B001
CS_OFFL_SIR_LRM_1B_20120523T174613_20120523T174918_B001
CS_OFFL_SIR_LRM_1B_20120523T212320_20120523T212409_B001
CS_OFFL_SIR_LRM_1B_20120523T223708_20120523T224031_B001
CS_OFFL_SIR_LRM_2_20120522T234702_20120523T001526_B001
CS_OFFL_SIR_LRM_2_20120523T042502_20120523T042833_B001
CS_OFFL_SIR_LRM_2_20120523T060902_20120523T061149_B001
CS_OFFL_SIR_LRM_2_20120523T080538_20120523T080728_B001
CS_OFFL_SIR_LRM_2_20120523T102452_20120523T102958_B001
CS_OFFL_SIR_LRM_2_20120523T120133_20120523T120217_B001
CS_OFFL_SIR_LRM_2_20120523T152220_20120523T152740_B001
CS_OFFL_SIR_LRM_2_20120523T162958_20120523T165440_B001
CS_OFFL_SIR_LRM_2_20120523T171326_20120523T174447_B001
CS_OFFL_SIR_LRM_2_20120523T180408_20120523T180512_B001
CS_OFFL_SIR_LRM_2_20120523T192044_20120523T192115_B001
CS_OFFL_SIR_LRM_2_20120523T194412_20120523T194505_B001
CS_OFFL_SIR_LRM_2_20120523T195847_20120523T201300_B001
CS_OFFL_SIR_LRM_2_20120523T223301_20120523T223453_B001
CS_OFFL_SIR_LRM_2_20120523T225551_20120523T225636_B001
CS_OFFL_SIR_SAR_1B_20120523T015414_20120523T015534_B001
CS_OFFL_SIR_SAR_1B_20120523T034043_20120523T034257_B001
CS_OFFL_SIR_SAR_1B_20120523T042833_20120523T043100_B001
CS_OFFL_SIR_SAR_1B_20120523T083941_20120523T084118_B001
CS_OFFL_SIR_SAR_1B_20120523T110842_20120523T111043_B001
CS_OFFL_SIR_SAR_1B_20120523T143035_20120523T143851_B001
CS_OFFL_SIR_SAR_1B_20120523T192007_20120523T192043_B001
CS_OFFL_SIR_SAR_1B_20120523T195707_20120523T195846_B001
CS_OFFL_SIR_SAR_2A_20120523T015414_20120523T015534_B001
CS_OFFL_SIR_SAR_2A_20120523T061149_20120523T061906_B001
CS_OFFL_SIR_SAR_2A_20120523T210915_20120523T211327_B001
CS_OFFL_SIR_SAR_2A_20120523T234401_20120523T234609_B001
CS_OFFL_SIR_SIN_1B_20120523T003322_20120523T003504_B001
CS_OFFL_SIR_SIN_1B_20120523T093734_20120523T094240_B001
CS_OFFL_SIR_SIN_1B_20120523T102050_20120523T102209_B001
CS_OFFL_SIR_SIN_1B_20120523T125954_20120523T130322_B001
CS_OFFL_SIR_SIN_1B_20120523T140914_20120523T140930_B001
CS_OFFL_SIR_SIN_1B_20120523T142613_20120523T142704_B001
CS_OFFL_SIR_SIN_1B_20120523T151900_20120523T152220_B001
CS_OFFL_SIR_SIN_1B_20120523T183432_20120523T183609_B001
CS_OFFL_SIR_SIN_1B_20120523T201345_20120523T201532_B001
CS_OFFL_SIR_SIN_1B_20120523T205929_20120523T210036_B001
CS_OFFL_SIR_SIN_1B_20120523T210834_20120523T210915_B001
CS_OFFL_SIR_SIN_1B_20120523T211327_20120523T211346_B001
CS_OFFL_SIR_SIN_1B_20120523T220304_20120523T220511_B001
CS_OFFL_SIR_SIN_2_20120523T012217_20120523T012225_B001