1. Overview

Report Production Date:	03-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	See Section 5.3
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement Data Set Check	Nominal

Mission / Instrument News	
25-May-2012	None
26-May-2012	None
27-May-2012	Nothing planned

2. Global Coverage

Global Coverage (north pole view)
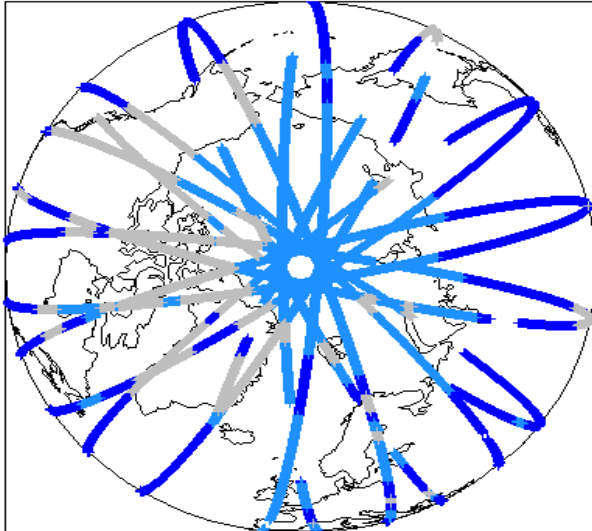
Global Coverage (south pole view)
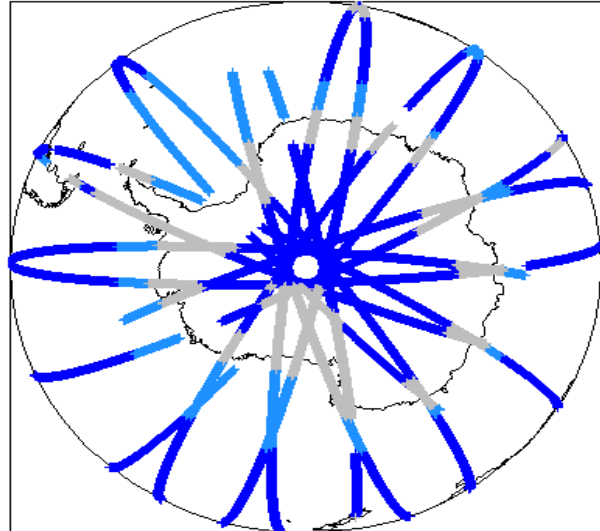
Global Coverage
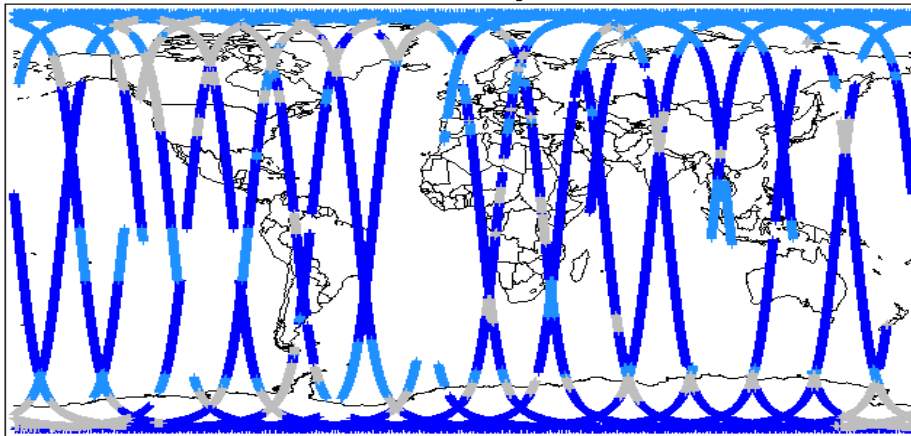
Mode Coverage (%)		
	LRM	63.83
	SAR	22.46
	SIN	13.55

Mode Coverage
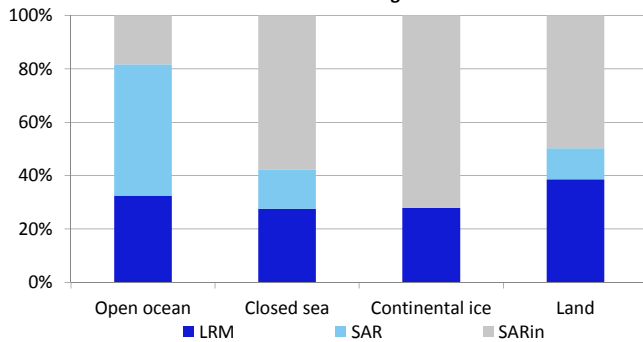
Surface Type
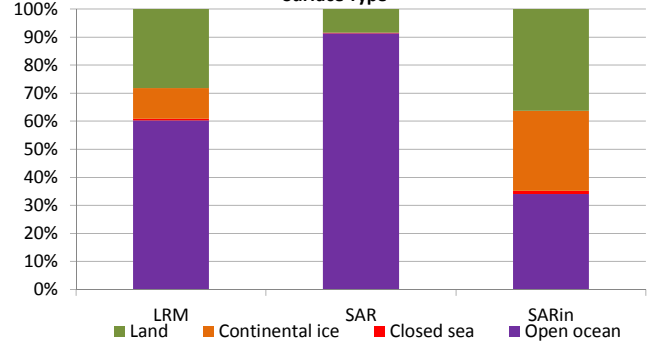
3. Instrument Configuration

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_20120526T053055_20120526T060305_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_20120526T175922_20120526T183005_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_20120525T235452_20120526T000055_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_20120526T115403_20120526T120222_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: 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 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_20120526T231056_20120527T005010_B001	CS_OPER_AUX_ORBDOR_20120525T215526_2012052 7T002326_0001	Coverage missing for intervals [2012-05-27T00:23:26, 2012-05-27T00:50:09]

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__20120526T053055_20120526T060305_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__20120526T175922_20120526T183005_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_20120525T235452_20120526T000055_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: 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	43	42	0	42	0
SIR_LRM_1B	115	116	82	34	0
SIR_LRM_2	106	111	0	111	0
SIR_SAR_1B	102	100	0	100	0
SIR_SAR_2A	85	96	3	93	0
SIR_SIN_1B	93	97	0	97	0
SIR_SIN_2	82	92	0	92	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 33

Product name
CS_OFFL_SIR_GDR_2A_20120525T222232_20120526T000146_B001
CS_OFFL_SIR_LRM_1B_20120526T043204_20120526T043504_B001
CS_OFFL_SIR_LRM_1B_20120526T081646_20120526T081652_B001
CS_OFFL_SIR_LRM_1B_20120526T094015_20120526T100510_B001
CS_OFFL_SIR_LRM_1B_20120526T125011_20120526T125557_B001
CS_OFFL_SIR_LRM_1B_20120526T174251_20120526T175104_B001
CS_OFFL_SIR_LRM_2__20120526T003934_20120526T004534_B001
CS_OFFL_SIR_LRM_2__20120526T021002_20120526T021055_B001
CS_OFFL_SIR_LRM_2__20120526T061556_20120526T061916_B001
CS_OFFL_SIR_LRM_2__20120526T071047_20120526T071258_B001
CS_OFFL_SIR_LRM_2__20120526T072934_20120526T073913_B001
CS_OFFL_SIR_LRM_2__20120526T114837_20120526T114845_B001
CS_OFFL_SIR_LRM_2__20120526T150632_20120526T150826_B001
CS_OFFL_SIR_LRM_2__20120526T210152_20120526T210903_B001
CS_OFFL_SIR_LRM_2__20120526T221308_20120526T223804_B001
CS_OFFL_SIR_SAR_1B_20120525T235452_20120526T000055_B001
CS_OFFL_SIR_SAR_1B_20120526T051449_20120526T051615_B001
CS_OFFL_SIR_SAR_1B_20120526T093907_20120526T094014_B001
CS_OFFL_SIR_SAR_1B_20120526T175232_20120526T175922_B001
CS_OFFL_SIR_SAR_2A_20120525T235452_20120526T000055_B001
CS_OFFL_SIR_SAR_2A_20120526T063639_20120526T063842_B001
CS_OFFL_SIR_SAR_2A_20120526T074334_20120526T074343_B001
CS_OFFL_SIR_SAR_2A_20120526T122640_20120526T123241_B001
CS_OFFL_SIR_SAR_2A_20120526T133740_20120526T134136_B001
CS_OFFL_SIR_SAR_2A_20120526T201516_20120526T202219_B001
CS_OFFL_SIR_SIN_1B_20120526T070458_20120526T070612_B001
CS_OFFL_SIR_SIN_1B_20120526T075334_20120526T075345_B001
CS_OFFL_SIR_SIN_2__20120526T084917_20120526T084953_B001
CS_OFFL_SIR_SIN_2__20120526T110939_20120526T111058_B001
CS_OFFL_SIR_SIN_2__20120526T131302_20120526T131622_B001
CS_OFFL_SIR_SIN_2__20120526T184144_20120526T184213_B001
CS_OFFL_SIR_SIN_2__20120526T200615_20120526T200738_B001
CS_OFFL_SIR_SIN_2__20120526T224926_20120526T225057_B001