IDEAS Daily Report for OFFLINE data: 19/08/2012

1. Overview

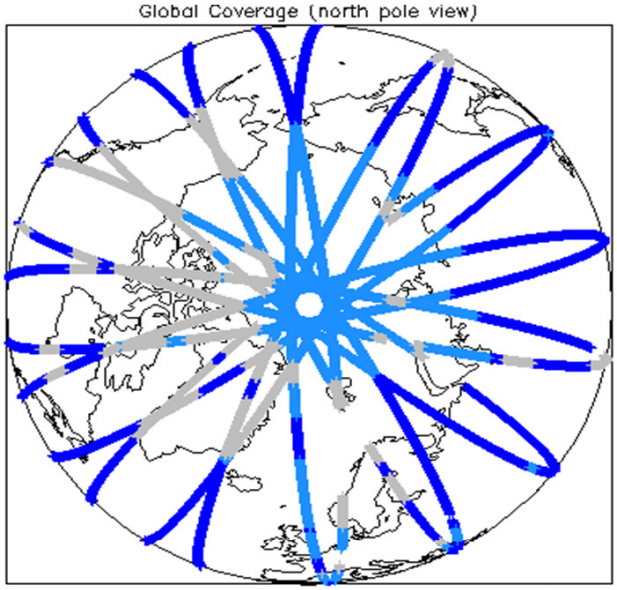
Report Production Date:	10-May-2013
Data Used:	OFFLINE L1B and L2 Science Data

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

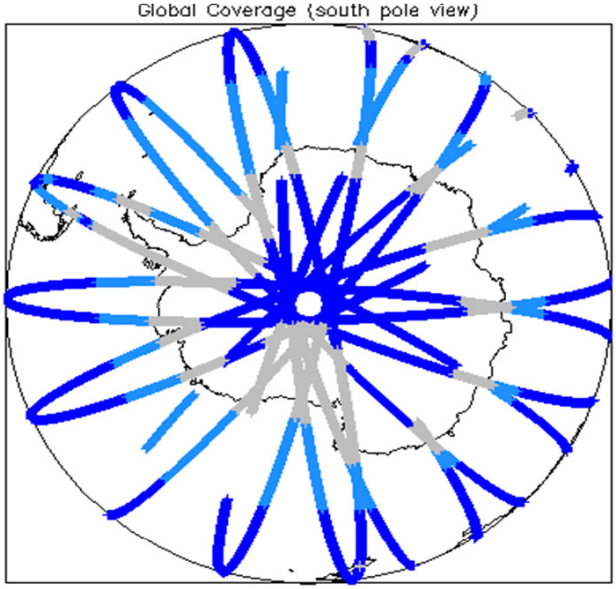
Mission / Instrument News	
18-Aug-2012	None
19-Aug-2012	None
20-Aug-2012	Nothing planned

2. Global Coverage

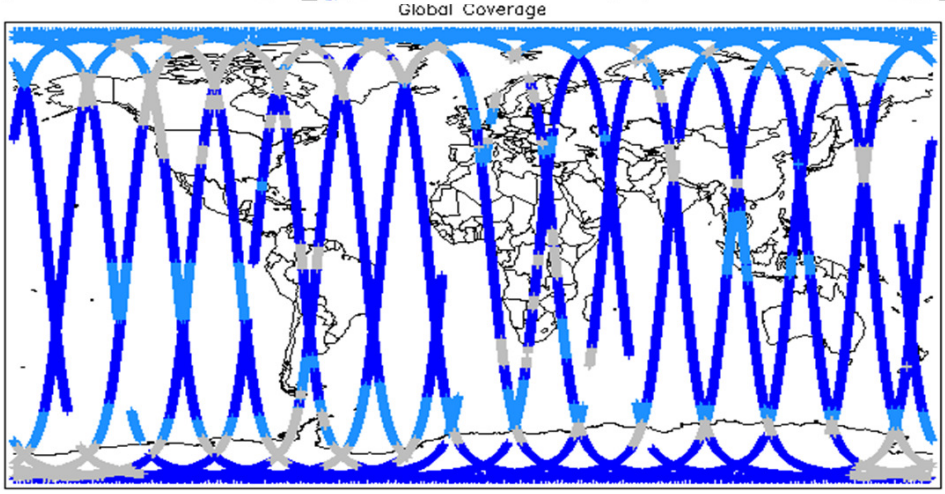
Global Coverage (north pole view)



Global Coverage (south pole view)



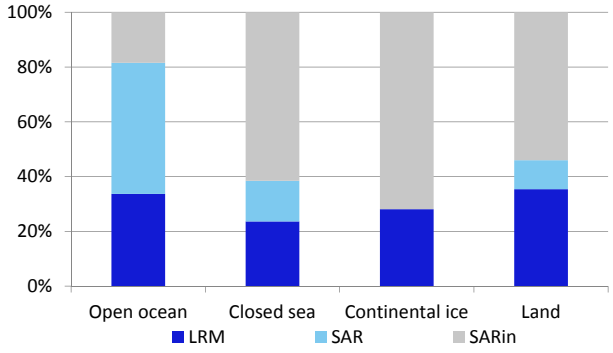
Global Coverage



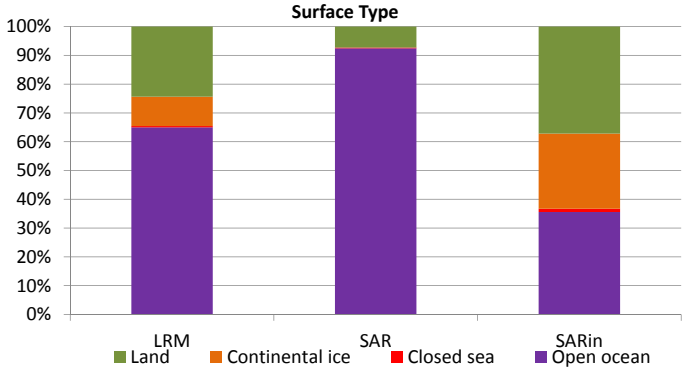
Mode Coverage(%)

LRM	67.97
SAR	18.71
SIN	13.16

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 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_20120819T055634_20120819T060106_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20120819T115456_20120819T120105_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_1B_20120819T175830_20120819T180039_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: 8

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120819T005836_20120819T010616_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120819T020911_20120819T022407_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_LRM_1B_20120819T031706_20120819T031957_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120819T061814_20120819T062217_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120819T125216_20120819T125920_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120819T155505_20120819T155724_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120819T171818_20120819T173502_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_SAR_1B_20120819T022407_20120819T022609_B001	Attitude correction missing	The attitude has not been corrected

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_20120818T230738_20120819T004652_B001	CS_OPER_AUX_ORBDOR_20120817T215525_20120819T002325_0001	Coverage missing for intervals [2012-08-19T00:23:25, 2012-08-19T00:46:51]

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__20120819T055634_20120819T060106_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2__20120819T115456_20120819T120105_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SIN_2__20120819T175830_20120819T180039_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	42	40	0	40	0
SIR_LRM_1B	107	107	96	11	0
SIR_LRM_2	100	100	1	99	0
SIR_SAR_1B	86	79	0	79	0
SIR_SAR_2A	79	86	4	82	0
SIR_SIN_1B	101	93	0	93	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: 35

Product name
CS_OFFL_SIR_GDR_2A_20120818T230738_20120819T004652_B001
CS_OFFL_SIR_GDR_2A_20120819T140040_20120819T153954_B001
CS_OFFL_SIR_LRM_1B_20120818T234806_20120819T001241_B001
CS_OFFL_SIR_LRM_1B_20120819T091522_20120819T091932_B001
CS_OFFL_SIR_LRM_1B_20120819T133022_20120819T133835_B001
CS_OFFL_SIR_LRM_2__20120818T234806_20120819T001241_B001
CS_OFFL_SIR_LRM_2__20120819T001934_20120819T002235_B001
CS_OFFL_SIR_LRM_2__20120819T003011_20120819T005447_B001
CS_OFFL_SIR_LRM_2__20120819T025812_20120819T031450_B001
CS_OFFL_SIR_LRM_2__20120819T041332_20120819T042540_B001
CS_OFFL_SIR_LRM_2__20120819T060228_20120819T060303_B001
CS_OFFL_SIR_LRM_2__20120819T163130_20120819T164548_B001
CS_OFFL_SIR_LRM_2__20120819T170140_20120819T171216_B001
CS_OFFL_SIR_LRM_2__20120819T225417_20120819T225429_B001
CS_OFFL_SIR_SAR_1B_20120819T001241_20120819T001710_B001
CS_OFFL_SIR_SAR_1B_20120819T034729_20120819T034838_B001
CS_OFFL_SIR_SAR_1B_20120819T040234_20120819T040413_B001
CS_OFFL_SIR_SAR_1B_20120819T052636_20120819T052813_B001
CS_OFFL_SIR_SAR_1B_20120819T105554_20120819T105756_B001
CS_OFFL_SIR_SAR_1B_20120819T152750_20120819T152858_B001
CS_OFFL_SIR_SAR_1B_20120819T174652_20120819T174922_B001
CS_OFFL_SIR_SAR_1B_20120819T182443_20120819T182655_B001
CS_OFFL_SIR_SAR_1B_20120819T191757_20120819T192027_B001
CS_OFFL_SIR_SAR_2A_20120819T082929_20120819T083353_B001
CS_OFFL_SIR_SIN_1B_20120819T052449_20120819T052636_B001
CS_OFFL_SIR_SIN_1B_20120819T065407_20120819T065543_B001
CS_OFFL_SIR_SIN_1B_20120819T070247_20120819T070534_B001
CS_OFFL_SIR_SIN_1B_20120819T074951_20120819T075118_B001
CS_OFFL_SIR_SIN_1B_20120819T092418_20120819T092508_B001
CS_OFFL_SIR_SIN_1B_20120819T141735_20120819T142152_B001
CS_OFFL_SIR_SIN_1B_20120819T174114_20120819T174240_B001
CS_OFFL_SIR_SIN_1B_20120819T183656_20120819T183829_B001
CS_OFFL_SIR_SIN_1B_20120819T192651_20120819T192710_B001
CS_OFFL_SIR_SIN_1B_20120819T213811_20120819T213915_B001
CS_OFFL_SIR_SIN_2__20120819T213811_20120819T213915_B001