IDEAS Daily Report for OFFLINE data: 10/07/2013

1. Overview

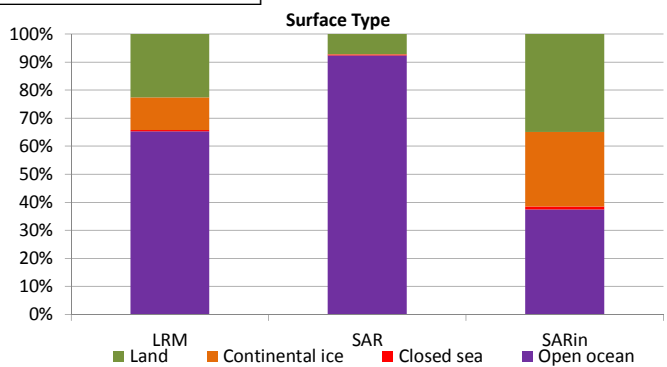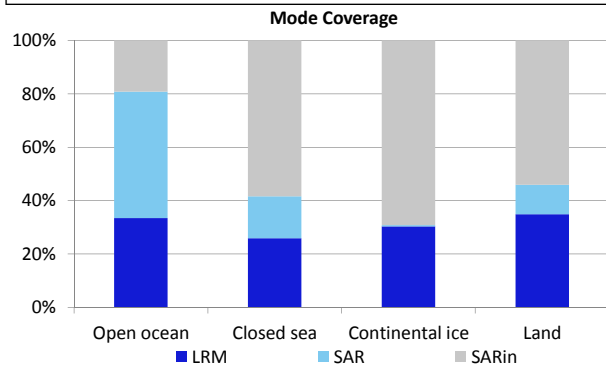| Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	See Section 5.3
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement Data Set Check	See Section 4.5 and 5.5

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

Mission / Instrument News	
09-Jul-2013	None
10-Jul-2013	None
11-Jul-2013	Nothing planned

2. Global Coverage

Global Coverage (north pole view)

Global Coverage (south pole view)

Global Coverage
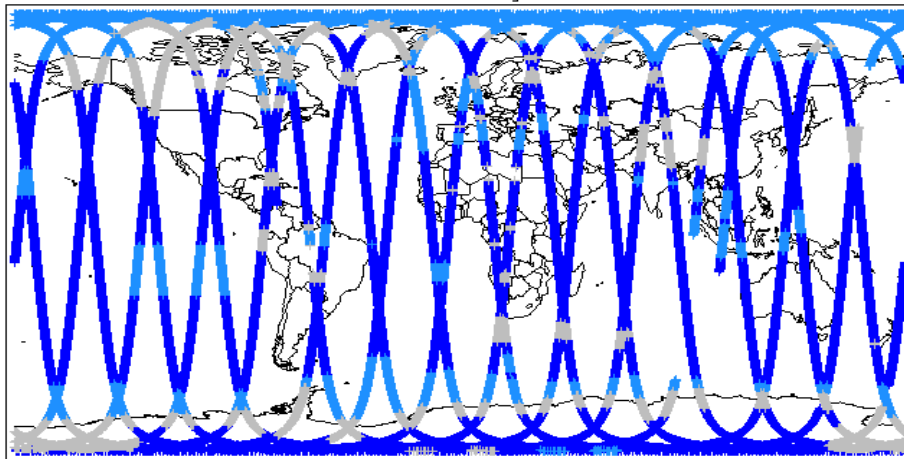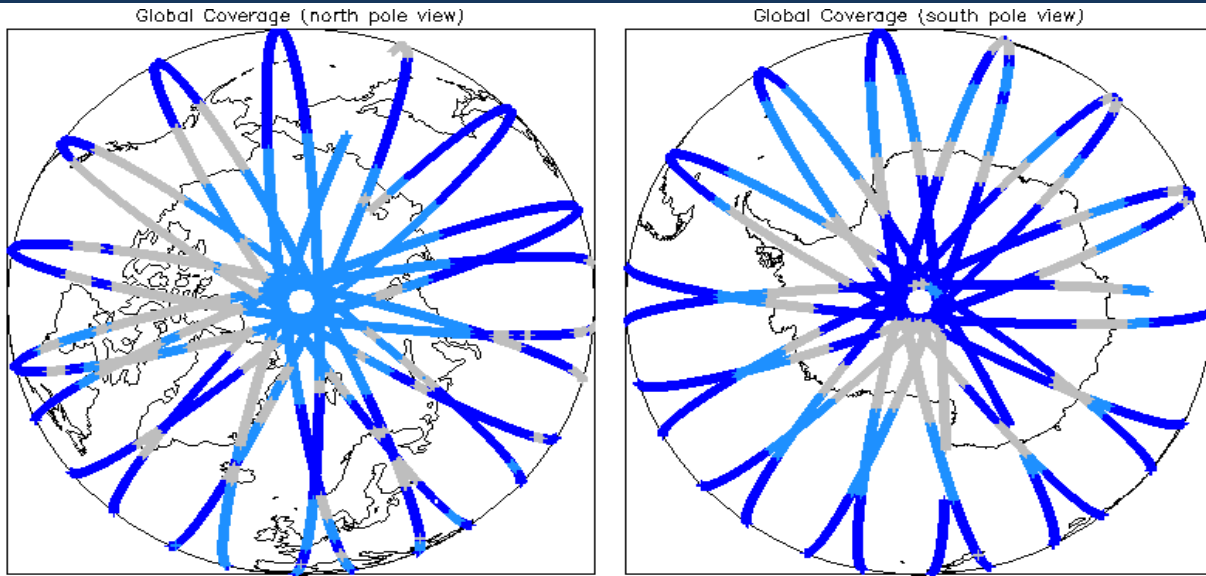
Mode Coverage(%)		
	LRM	65.63
	SAR	20.14
	SIN	14.05

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 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: 4

Product	Test Failed
CS_OFFL_SIR_LRM_1B_20130709T235933_20130710T000142_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_1B_20130710T175830_20130710T180137_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20130710T055922_20130710T060235_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_1B_20130710T115949_20130710T120058_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_20130710T052713_20130710T053131_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130710T070922_20130710T071107_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130710T071116_20130710T071202_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130710T134400_20130710T140112_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130710T152605_20130710T154025_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20130710T230114_20130710T230413_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SAR_1B_20130710T230416_20130710T230551_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20130710T230413_20130710T230415_B001	Attitude correction missing	The attitude has not been corrected

5. Level 2 Data Quality Check

5.1 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

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_20130709T235628_20130710T013541_B001	CS_OPER_AUX_ORBDOR_20130708T215525_20130710T002325_0001	Coverage missing for intervals [2013-07-10T00:23:25, 2013-07-10T01:35:41]
CS_OFFL_SIR_GDR_2A_20130710T230537_20130711T004451_B001	CS_OPER_AUX_ORBDOR_20130709T215525_20130711T002325_0001	Coverage missing for intervals [2013-07-11T00:23:25, 2013-07-11T00:44:51]

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: 10

Product	Test Failed
CS_OFFL_SIR_LRM_2__20130709T235933_20130710T000142_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2__20130710T003836_20130710T004119_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2__20130710T071116_20130710T071202_B001	Error in MSS/Geoid, and Ocean Depth Land Elevation model, correction computations
CS_OFFL_SIR_LRM_2__20130710T134400_20130710T140112_B001	Error in MSS/Geoid, and Ocean Depth Land Elevation model, correction computations
CS_OFFL_SIR_LRM_2__20130710T175830_20130710T180137_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_LRM_2__20130710T192110_20130710T192231_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130710T004119_20130710T004233_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130710T055922_20130710T060235_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130710T115949_20130710T120058_B001	Dynamic atmosphere correction error
CS_OFFL_SIR_SAR_2A_20130710T192231_20130710T192238_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: 1

Product	Test Failed	Description
CS_OFFL_SIR_SAR_2A_20130710T235031_20130710T235332_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	38	34	0	34	0
SIR_LRM_1B	121	136	136	0	0
SIR_LRM_2	121	138	4	134	0
SIR_SAR_1B	100	111	0	111	0
SIR_SAR_2A	95	112	7	105	0
SIR_SIN_1B	107	116	0	116	0
SIR_SIN_2	117	121	0	121	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 25

Product name
CS_OFFL_SIR_GDR_2A_20130709T235628_20130710T013541_B001
CS_OFFL_SIR_GDR_2A_20130710T013541_20130710T031455_B001
CS_OFFL_SIR_GDR_2A_20130710T031455_20130710T045409_B001
CS_OFFL_SIR_GDR_2A_20130710T045409_20130710T063322_B001
CS_OFFL_SIR_GDR_2A_20130710T063322_20130710T081236_B001
CS_OFFL_SIR_GDR_2A_20130710T095149_20130710T113103_B001
CS_OFFL_SIR_GDR_2A_20130710T113103_20130710T131016_B001
CS_OFFL_SIR_GDR_2A_20130710T131016_20130710T144930_B001
CS_OFFL_SIR_GDR_2A_20130710T144930_20130710T162843_B001
CS_OFFL_SIR_GDR_2A_20130710T162843_20130710T180757_B001
CS_OFFL_SIR_GDR_2A_20130710T180757_20130710T194710_B001
CS_OFFL_SIR_GDR_2A_20130710T194710_20130710T212624_B001
CS_OFFL_SIR_GDR_2A_20130710T212624_20130710T230537_B001
CS_OFFL_SIR_LRM_1B_20130709T235933_20130710T000142_B001
CS_OFFL_SIR_LRM_1B_20130710T011046_20130710T011055_B001
CS_OFFL_SIR_LRM_1B_20130710T134400_20130710T140112_B001
CS_OFFL_SIR_LRM_2__20130709T235933_20130710T000142_B001
CS_OFFL_SIR_LRM_2__20130710T132258_20130710T132312_B001
CS_OFFL_SIR_LRM_2__20130710T132315_20130710T132623_B001
CS_OFFL_SIR_SAR_1B_20130710T210130_20130710T210135_B001
CS_OFFL_SIR_SIN_1B_20130710T015747_20130710T015914_B001
CS_OFFL_SIR_SIN_1B_20130710T034159_20130710T034220_B001
CS_OFFL_SIR_SIN_1B_20130710T042259_20130710T042422_B001
CS_OFFL_SIR_SIN_1B_20130710T150903_20130710T150927_B001
CS_OFFL_SIR_SIN_1B_20130710T180627_20130710T180652_B001