IDEAS Daily Report for OFFLINE data: 13/05/2012

1. Overview

| Report Production Date:	12-Feb-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

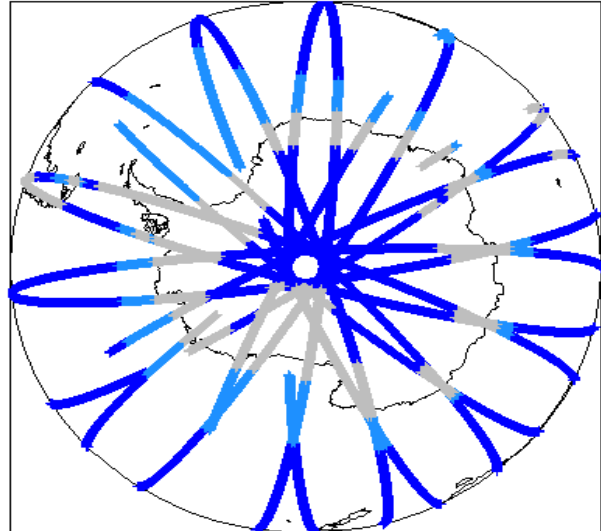| Mission / Instrument News	
12-May-2012	None
13-May-2012	None
14-May-2012	Nothing planned

2. Global Coverage

Global Coverage (north pole view)
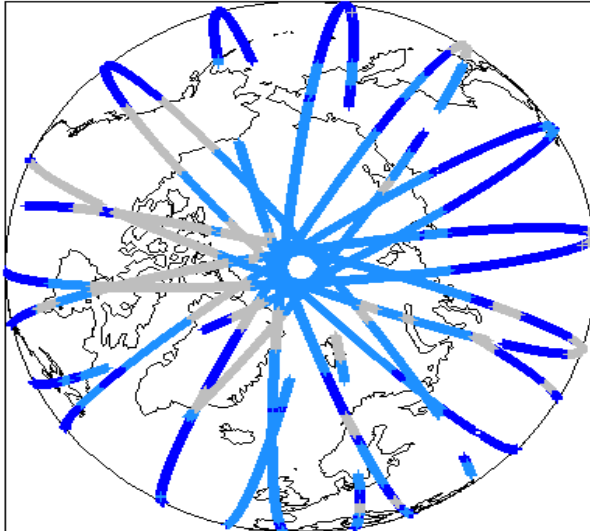
Global Coverage (south pole view)
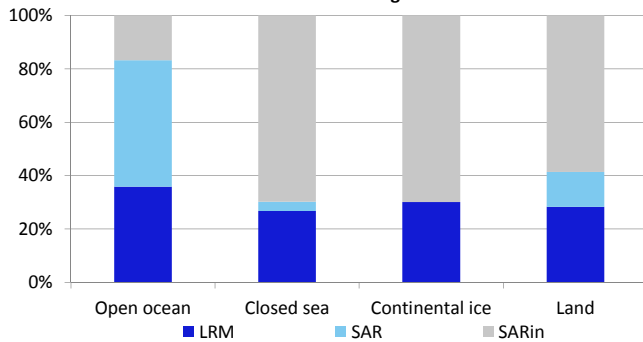
Global Coverage
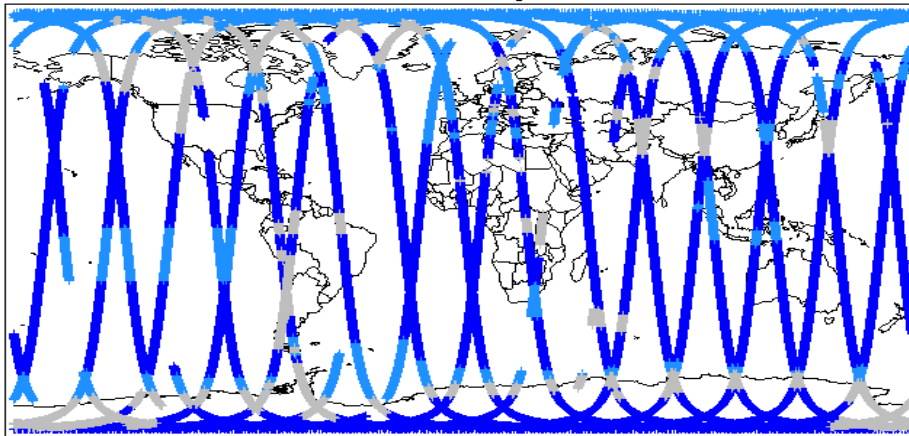
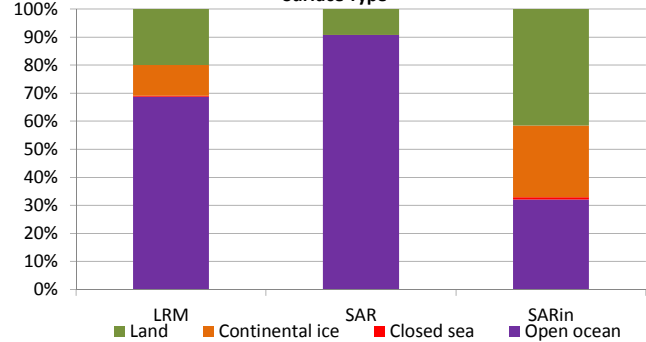| Mode Coverage (%)		
	LRM	63.92
	SAR	20.91
	SIN	14.99

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_20120513T054747_20120513T061249_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_20120513T115900_20120513T121002_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_20120513T175846_20120513T180128_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_SIN_1B_20120512T235916_20120513T000025_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: 3

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120513T063645_20120513T070949_B001	TRK echo error	The tracking echo has returned an error
CS_OFFL_SIR_LRM_1B_20120513T141321_20120513T141946_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20120513T141947_20120513T142118_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 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: 4

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2__20120513T054747_20120513T061249_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__20120513T115900_20120513T121002_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__20120513T175846_20120513T180128_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_SIN_2__20120512T235917_20120513T000025_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	36	33	0	33	0
SIR_LRM_1B	138	142	129	13	0
SIR_LRM_2	123	144	2	142	0
SIR_SAR_1B	100	101	0	101	0
SIR_SAR_2A	96	99	5	94	0
SIR_SIN_1B	98	96	0	96	0
SIR_SIN_2	92	97	0	97	0

6.1 QCC Errors

Number of products with QCC errors:　　　　0

6.2 Missing QCC Reports

Number of products with missing QCC reports:　　　　10

Product name
CS_OFFL_SIR_GDR_2A_20120512T232800_20120513T010714_B001
CS_OFFL_SIR_LRM_1B_20120513T014536_20120513T015558_B001
CS_OFFL_SIR_LRM_1B_20120513T040739_20120513T043656_B001
CS_OFFL_SIR_SAR_2A_20120513T161951_20120513T162207_B001
CS_OFFL_SIR_SAR_2A_20120513T174958_20120513T175015_B001
CS_OFFL_SIR_SIN_1B_20120512T235916_20120513T000025_B001
CS_OFFL_SIR_SIN_1B_20120513T012330_20120513T012649_B001
CS_OFFL_SIR_SIN_1B_20120513T015558_20120513T015932_B001
CS_OFFL_SIR_SIN_2__20120512T235917_20120513T000025_B001
CS_OFFL_SIR_SIN_2__20120513T153955_20120513T154119_B001