IDEAS Daily Report for OFFLINE data: 28/04/2012

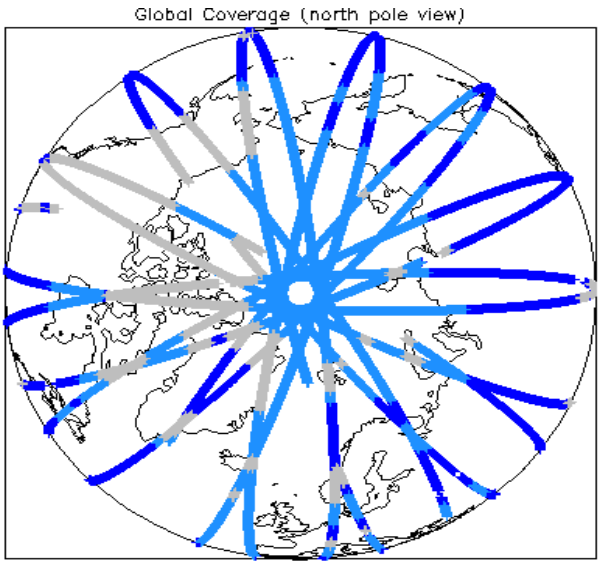
1. Overview

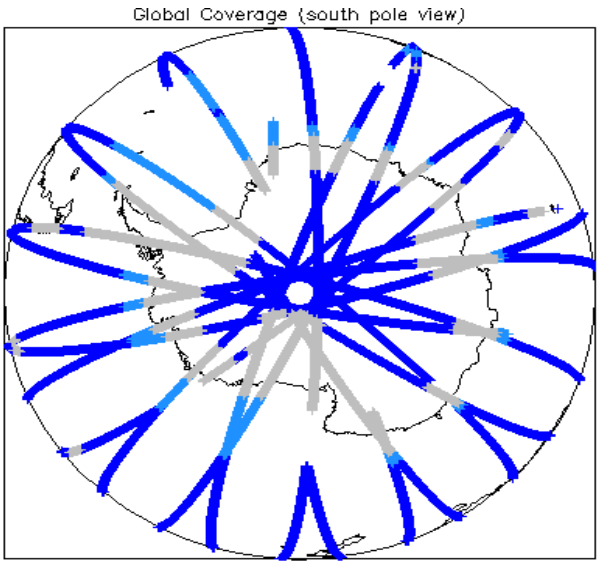
Report Production Date:	04-Jun-2014
Data Used:	OFFLINE L1B and L2 Science Data

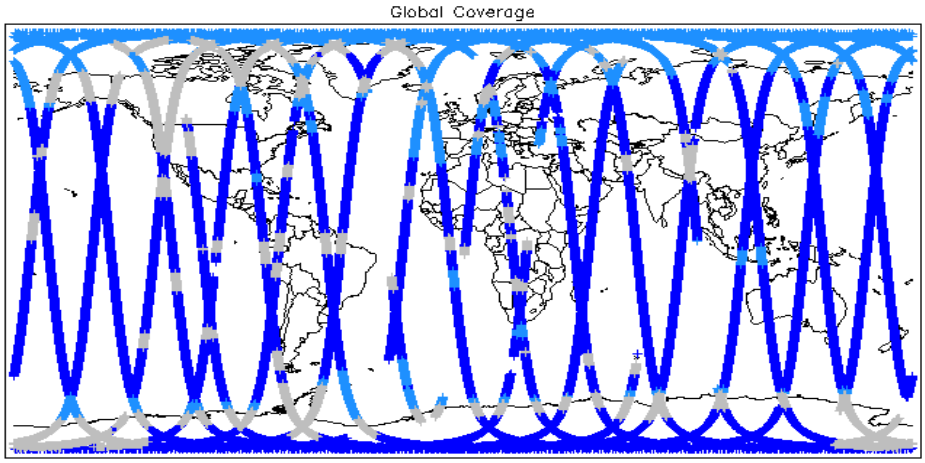
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	See Section 5.3
Auxiliary Correction Check	See Section 4.4 and 5.4
Measurement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

Mission / Instrument News	
27-Apr-2012	None
28-Apr-2012	None
29-Apr-2012	Nothing planned

2. Global Coverage

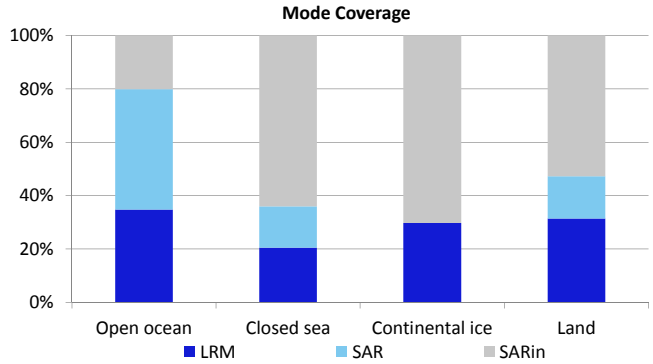


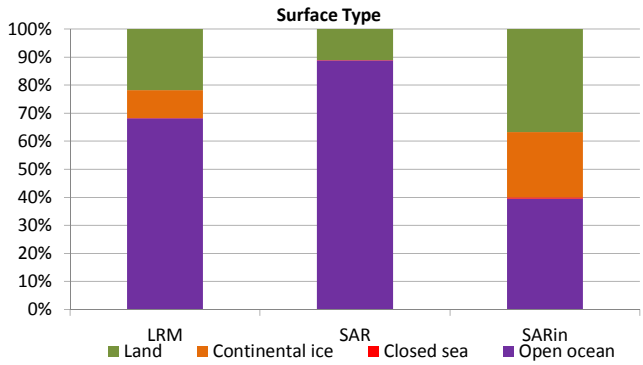




Mode Coverage (%)

	LRM	68.74
	SAR	16.14
	SIN	14.94





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 & 2

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: 3

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20120428T115301_20120428T121840_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_20120428T174142_20120428T181503_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_20120428T055234_20120428T060457_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_20120428T170442_20120428T170715_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SAR_1B_20120428T103117_20120428T103121_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_SIN_1B_20120428T170715_20120428T170835_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: 2

Product	AUX File	Comment
CS_OFFL_SIR_GDR_2A_20120427T225644_20120428T003557_B001	CS_OPER_AUX_ORBDOR_20120426T215526_20120428T002326_0001	Coverage missing for intervals [2012-04-28T00:23:26, 2012-04-28T00:35:57]
CS_OFFL_SIR_GDR_2A_20120428T234507_20120429T012421_B001	CS_OPER_AUX_ORBDOR_20120427T215526_20120429T002326_0001	Coverage missing for intervals [2012-04-29T00:23:26, 2012-04-29T01:24:21]

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__20120428T115301_20120428T121840_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__20120428T174142_20120428T181503_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_20120428T055235_20120428T060457_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_20120428T154335_20120428T154521_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	20	19	0	19	0
SIR_LRM_1B	128	120	114	6	0
SIR_LRM_2	126	122	0	122	0
SIR_SAR_1B	91	91	0	91	0
SIR_SAR_2A	87	84	6	78	0
SIR_SIN_1B	106	105	0	105	0
SIR_SIN_2	105	102	0	102	0

6.1 QCC Errors

Number of products with QCC errors: 0

6.2 Missing QCC Reports

Number of products with missing QCC reports: 20

Product name
CS_OFFL_SIR_GDR_2A_20120427T225644_20120428T003557_B001
CS_OFFL_SIR_LRM_1B_20120427T233816_20120428T000038_B001
CS_OFFL_SIR_LRM_1B_20120428T014511_20120428T015334_B001
CS_OFFL_SIR_LRM_1B_20120428T015652_20120428T023132_B001
CS_OFFL_SIR_LRM_1B_20120428T024454_20120428T024608_B001
CS_OFFL_SIR_LRM_1B_20120428T032503_20120428T033028_B001
CS_OFFL_SIR_LRM_1B_20120428T100323_20120428T101145_B001
CS_OFFL_SIR_LRM_1B_20120428T113219_20120428T113945_B001
CS_OFFL_SIR_LRM_1B_20120428T224341_20120428T224426_B001
CS_OFFL_SIR_LRM_2__20120427T233816_20120428T000038_B001
CS_OFFL_SIR_LRM_2__20120428T090755_20120428T091142_B001
CS_OFFL_SIR_LRM_2__20120428T170835_20120428T171716_B001
CS_OFFL_SIR_LRM_2__20120428T183007_20120428T183045_B001
CS_OFFL_SIR_SAR_2A_20120428T060534_20120428T060657_B001
CS_OFFL_SIR_SAR_2A_20120428T072615_20120428T072855_B001
CS_OFFL_SIR_SAR_2A_20120428T145723_20120428T150017_B001
CS_OFFL_SIR_SIN_1B_20120428T093254_20120428T093412_B001
CS_OFFL_SIR_SIN_2__20120428T125247_20120428T125454_B001
CS_OFFL_SIR_SIN_2__20120428T131054_20120428T131234_B001
CS_OFFL_SIR_SIN_2__20120428T160748_20120428T160839_B001