IDEAS+ Daily Report for NRT data: 08/07/2014

1. Overview

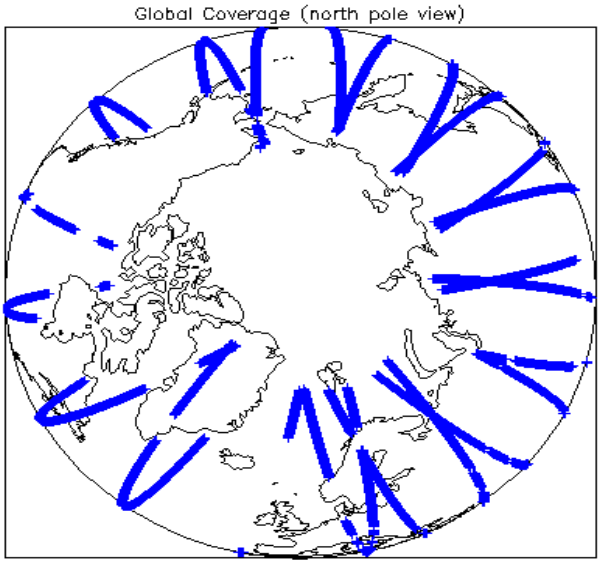
Report Production Date:	09-Jul-2014
Data Used:	L1 and L2 Fast Delivery Marine Mode (FDM), and CAL Data

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
Correction Error Flags	Nominal
Measurement Confidence Flags	See Sections 5.5, 6.5, 6.6 and 6.8

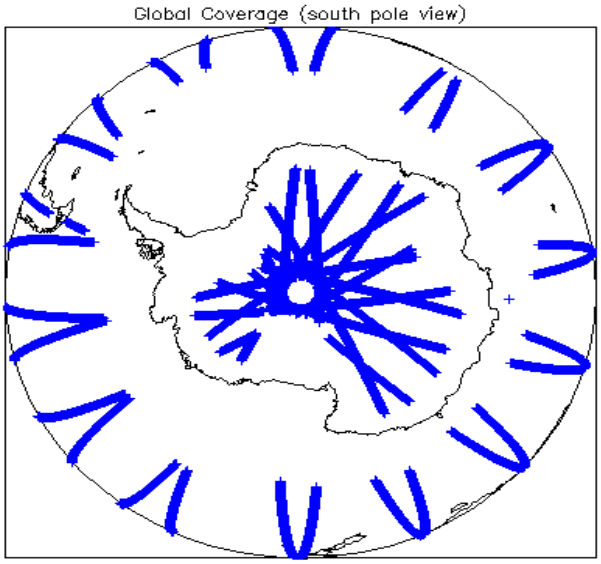
Mission / Instrument News	
07-Jul-2014	None
08-Jul-2014	None
09-Jul-2014	Nothing planned

2. Global Coverage

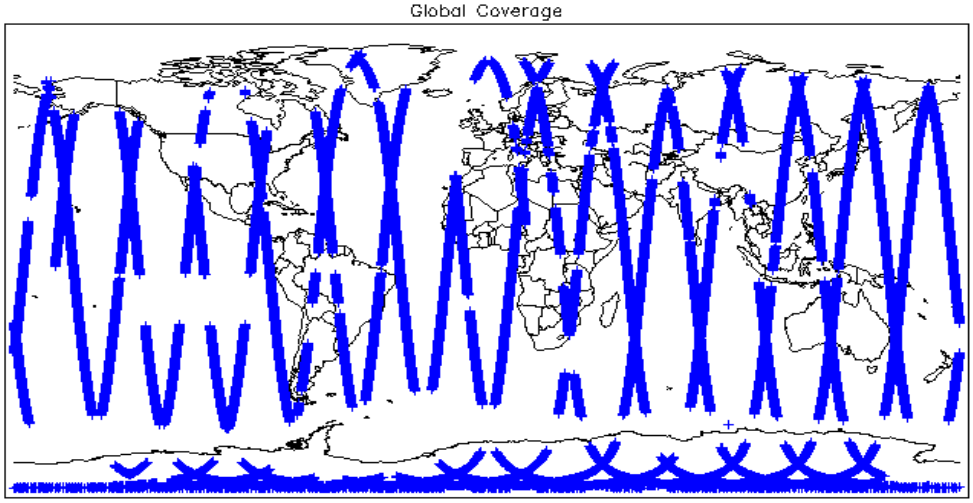
Global Coverage (north pole view)



Global Coverage (south pole view)



Global Coverage



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 Calibration Data Quality Check

4.1 L1 CAL 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

4.2 L1 CAL 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 processing chain.

Number of products with errors: 0

4.3 L1 CAL 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 L1 CAL Measurement Confidence Flags

CryoSat Cal1 and Cal2 data includes a measurement confidence flag word (field 11) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

5. Level 1B FDM Data Quality Check

5.1 L1B FDM 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 L1B FDM 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 L1B FDM 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

5.4 L1B Correction Error Flags

Each product is checked to detect auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors: 0

5.5 L1B FDM Measurement Confidence Flags

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_FDM_1B_20140708T033656_20140708T033935_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20140708T045834_20140708T051339_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20140708T064332_20140708T065153_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20140708T120543_20140708T121046_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20140708T161518_20140708T163017_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20140708T200742_20140708T200836_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20140708T214453_20140708T214455_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20140708T232128_20140708T232259_B001	Attitude correction missing	The attitude has not been corrected

6. Level 2 FDM Data Quality Check

6.1 L2 FDM 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

6.2 L2 FDM 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 processing chain.

Currently there is a high number of processing error flags set within the Level 2 FDM products (Product_Err and L2_Proc_Flag). These flags are set within L2 Header files (MPH field #19 and SPH field #29) and also within the L2 Product files (MPH field #35 and SPH field #33). They are set by the FDM processor when an error is detected during the L2 processing and also when the percentage of Data Set Records free of processing errors is below the minimum acceptable threshold set within the processor (currently set to 5%).

This issue is under investigation.

Number of products with errors: 0

6.3 L2 FDM 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

6.4 L2 FDM Correction Error Flags

Each product is checked to detect auxiliary corrections flagged by the ground-station processing chain as missing or containing errors.

Number of products with errors: 0

6.5 L2 FDM Measurement Confidence Flags

CryoSat L2 data includes a quality flag word (field 8) for each 20-Hz measurement record. The bit value of this flag is an assessment of the measurement quality by the processing chain.

Number of products with errors: 8

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20140708T033656_20140708T033935_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20140708T045834_20140708T051339_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20140708T064332_20140708T065153_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20140708T120543_20140708T121046_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20140708T161518_20140708T163017_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2__20140708T200742_20140708T200836_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20140708T214453_20140708T214455_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20140708T232128_20140708T232259_B001	Attitude correction missing	The attitude has not been corrected

6.6 L2 FDM Range Measurement Flags

Each product is checked to detect range measurements flagged by the processing chain as missing or containing errors.

Number of products with errors: 3

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20140708T000400_20140708T000959_B001	OCOG Retracked Range Flag	The master fail flag is set by the OCOG call, for one or more records, indicating the values stored in fields #18, #19, #20 and #21 should be ignored for these records.
CS_OFFL_SIR_FDM_2__20140708T003021_20140708T003028_B001	OCOG Retracked Range Flag	The master fail flag is set by the OCOG call, for one or more records, indicating the values stored in fields #18, #19, #20 and #21 should be ignored for these records.
CS_OFFL_SIR_FDM_2__20140708T125637_20140708T133220_B001	OCOG Retracked Range Flag	The master fail flag is set by the OCOG call, for one or more records, indicating the values stored in fields #18, #19, #20 and #21 should be ignored for these records.

6.7 L2 FDM SWH and Backscatter Measurement Flags

Each product is checked to detect parameters related to SWH and sigma0 that are flagged by the processing chain as missing or containing errors.

Number of products with errors: 0

6.8 L2 FDM Geophysical Measurement Flags

Each product is checked to detect geophysical measurements flagged by the processing chain as missing or containing errors.

Number of products with errors: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20140708T000400_20140708T000959_B001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records.
CS_OFFL_SIR_FDM_2__20140708T003021_20140708T003028_B001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records.
CS_OFFL_SIR_FDM_2__20140708T034844_20140708T035822_B001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records.
CS_OFFL_SIR_FDM_2__20140708T135417_20140708T141710_B001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records.
CS_OFFL_SIR_FDM_2__20140708T184717_20140708T190224_B001	Ocean Retracking Quality Flag	The Ocean Retracking Quality Flag is set indicating the CFI Ocean Retracker was not successfully executed for one or more records.

7. 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.

Product type	Nb. Products	Nb. QCC Reports	Nb. Valid	Nb. Warnings	Nb. Errors
SIR_FDM_1B	135	0	0	0	0
SIR_FDM_2	136	0	0	0	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 Missing QCC Reports

Number of products with missing QCC reports: All