IDEAS Daily Report for NRT data: 05-Sep-2013

1. Overview

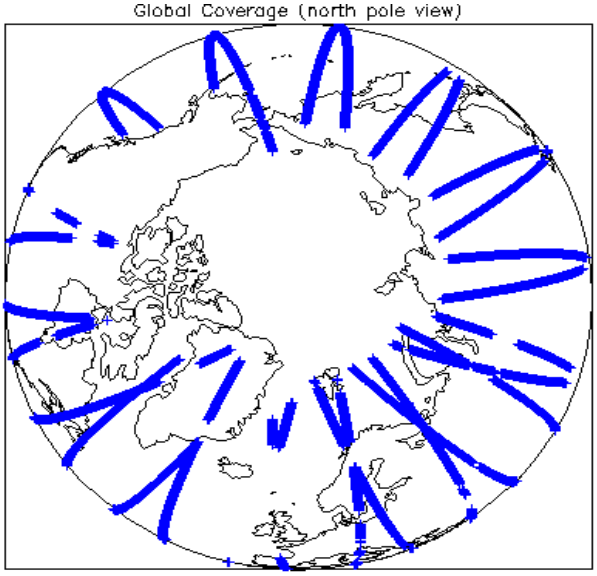
Report Production Date:	06-Sep-2013
Data Used:	L1 and L2 Fast Delivery Marine Mode (FDM), and CAL Data

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	See Section 5.3 and 6.3
Correction Error Flags	See Sections 5.4 and 6.4
Measurement Confidence Flags	See Sections 5.5, 6.5, 6.6 and 6.8

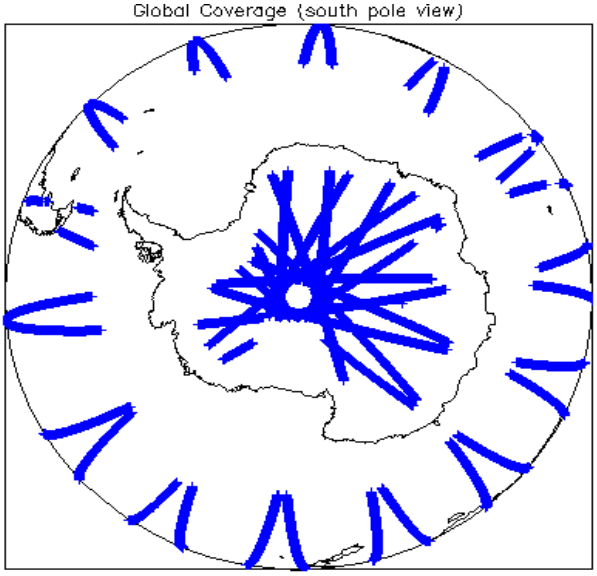
Mission / Instrument News	
04-Sep-2013	None
05-Sep-2013	None
06-Sep-2013	Nothing planned

2. Global Coverage

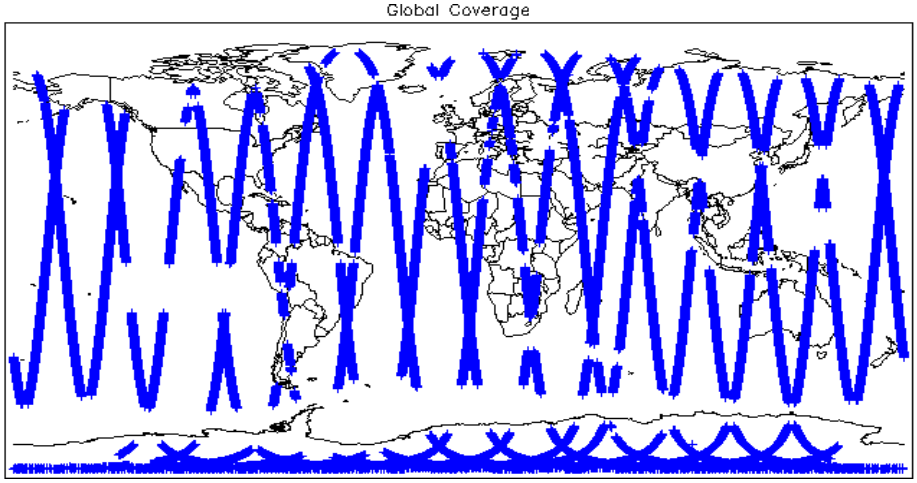
Global Coverage (north pole view)



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

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: 32

Product	AUX File	Comment
All SIR_FDM_1B_ products up to 20130905T061356	CS_OPER_AUXIWETTRP_20130905T000000_20130905T000000_0001	Missing Forecast Auxiliary File: CS_OPER_AUXIWETTRP

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: 32

Product	Test Failed	Description
All SIR_FDM_1B_ products up to 20130905T061356	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Due to a missing Forecast Auxiliary File, there was an error with the Dry tropospheric, Wet tropospheric and Inverse barometric corrections

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: 14

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20130905T000843_20130905T003602_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130905T032229_20130905T032235_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T032300_20130905T032459_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T032611_20130905T032829_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T032929_20130905T033046_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T033057_20130905T033105_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T033212_20130905T033246_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T033415_20130905T033657_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T033841_20130905T035909_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T040442_20130905T040951_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T041652_20130905T045213_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T112242_20130905T112738_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130905T112757_20130905T112822_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130905T144149_20130905T144304_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: 32

Product	AUX File	Comment
All SIR_FDM_2_ products up to 20130905T061356	CS_OPER_AUXIWETTRP_20130905T000000_20130905T000000_0001	Missing Forecast Auxiliary File: CS_OPER_AUXIWETTRP

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: 32

Product	Test Failed	Description
All SIR_FDM_2_ products up to 20130905T061356	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Due to a missing Forecast Auxiliary File, there was an error with the Dry tropospheric, Wet tropospheric and Inverse barometric corrections

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: 14

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130905T000843_20130905T003602_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130905T032229_20130905T032235_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T032300_20130905T032459_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T032611_20130905T032829_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T032929_20130905T033046_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T033057_20130905T033105_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T033212_20130905T033246_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T033415_20130905T033657_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T033841_20130905T035909_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T040442_20130905T040951_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T041652_20130905T045213_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T112242_20130905T112738_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130905T112757_20130905T112822_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130905T144149_20130905T144304_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__20130905T023831_20130905T031100_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__20130905T175833_20130905T180607_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__20130905T204943_20130905T205041_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: 41

Product	Test Failed	Description
All SIR_FDM_2_ products up to 20130905T061356 (32 products)	U-Wind component error, V-Wind component error	Due to a missing Forecast Auxiliary Files, there was an error with the U-Wind and V-wind components of the ECMWF model wind vector.
CS_OFFL_SIR_FDM_2__20130905T023831_20130905T031100_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__20130905T062450_20130905T063211_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__20130905T070408_20130905T071802_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__20130905T075223_20130905T080143_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__20130905T100352_20130905T102233_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__20130905T115015_20130905T120147_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__20130905T175833_20130905T180607_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__20130905T192750_20130905T194716_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__20130905T200710_20130905T201738_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__20130905T204943_20130905T205041_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	143	143	126	17	0
SIR_FDM_2	143	143	0	143	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 Missing QCC Reports

Number of products with missing QCC reports: 0