IDEAS Daily Report for NRT data: 27-May-2013

1. Overview

|	
Report Production Date:	29-May-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	Nominal
Correction Error Flags	See Sections 5.4 and 6.4
Measurement Confidence Flags	See Sections 5.5, 6.5, 6.6, 6.7 and 6.8

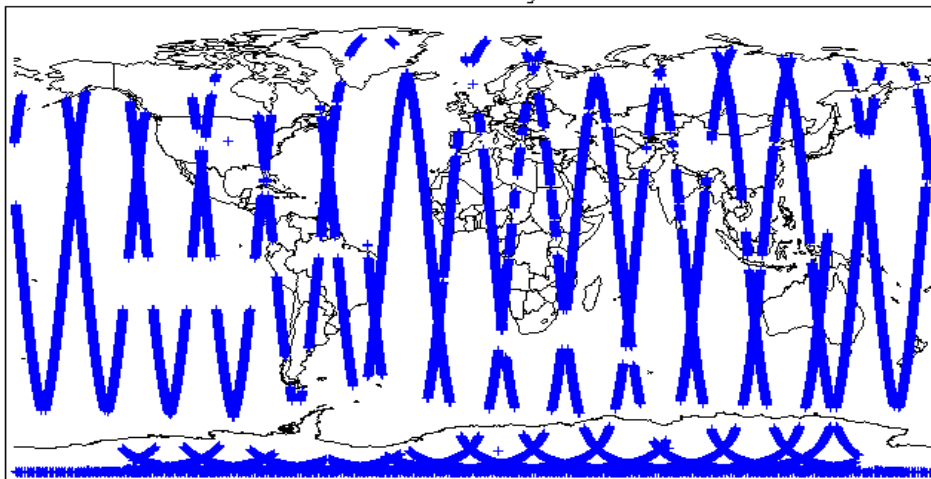| Mission / Instrument News	
26-May-2013	None
27-May-2013	None
28-May-2013	Nothing planned

2. Global Coverage

Global Coverage (north pole view)
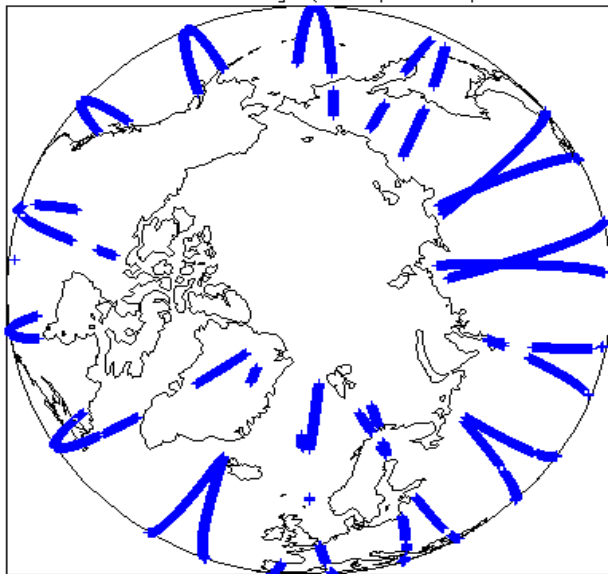
Global Coverage (south pole view)
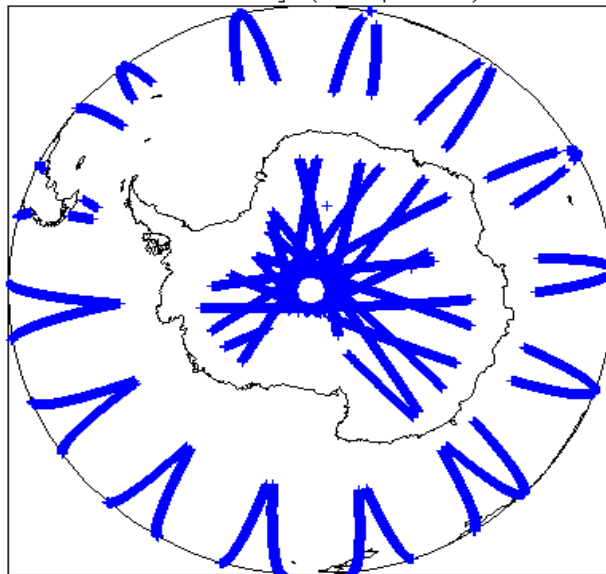
Global Coverage

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: 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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20130527T115811_20130527T120031_B001	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Coverage for Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP is missing between T120000 and T120031
CS_OFFL_SIR_FDM_1B_20130527T120222_20130527T120535_B001	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_1B_20130527T120730_20130527T122254_B001	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_1B_20130527T122457_20130527T123606_B001	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_1B_20130527T123608_20130527T124437_B001	Dry tropospheric correction error, Wet tropospheric correction error, Inverse barometric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used

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: 4

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20130527T160112_20130527T160151_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130527T173532_20130527T173753_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130527T191413_20130527T191535_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130527T220328_20130527T223724_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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130527T115811_20130527T120031_B001	Dry tropspheric correction error, Wet tropsheric correction error, Inverse barametric correction error	Coverage for Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP is missing between T120000 and T120031
CS_OFFL_SIR_FDM_2__20130527T120222_20130527T120535_B001	Dry tropspheric correction error, Wet tropsheric correction error, Inverse barametric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_2__20130527T120730_20130527T122254_B001	Dry tropspheric correction error, Wet tropsheric correction error, Inverse barametric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_2__20130527T122457_20130527T123606_B001	Dry tropspheric correction error, Wet tropsheric correction error, Inverse barametric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used
CS_OFFL_SIR_FDM_2__20130527T123608_20130527T124437_B001	Dry tropspheric correction error, Wet tropsheric correction error, Inverse barametric correction error	Forecast Auxiliary files AUXISURFPS, AUXISEAMPS, AUXIWETTRP were not used

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: 4

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130527T160112_20130527T160151_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130527T173532_20130527T173753_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130527T191413_20130527T191535_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130527T220328_20130527T223724_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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130527T054637_20130527T060302_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__20130527T100003_20130527T101220_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__20130527T160151_20130527T160154_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__20130527T202345_20130527T202535_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__20130527T230152_20130527T232712_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: 1

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130527T102828_20130527T105332_B001	OCOG Backscatter Status Flag	The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #47, #48, #49 and #50 should be ignored for these records.

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: 11

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130527T022957_20130527T023445_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__20130527T031326_20130527T033540_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__20130527T054637_20130527T060302_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__20130527T100003_20130527T101220_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__20130527T115811_20130527T120031_B001	U-Wind, V-Wind	Forecast Auxiliary files AUXIU_WIND, AUXIV_WIND were not used.
CS_OFFL_SIR_FDM_2__20130527T120222_20130527T120535_B001	U-Wind, V-Wind	Forecast Auxiliary files AUXIU_WIND, AUXIV_WIND were not used.
CS_OFFL_SIR_FDM_2__20130527T120730_20130527T122254_B001	U-Wind, V-Wind	Forecast Auxiliary files AUXIU_WIND, AUXIV_WIND were not used.
CS_OFFL_SIR_FDM_2__20130527T122457_20130527T123606_B001	U-Wind, V-Wind	Forecast Auxiliary files AUXIU_WIND, AUXIV_WIND were not used.
CS_OFFL_SIR_FDM_2__20130527T123608_20130527T124437_B001	U-Wind, V-Wind	Forecast Auxiliary files AUXIU_WIND, AUXIV_WIND were not used.
CS_OFFL_SIR_FDM_2__20130527T125942_20130527T131336_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__20130527T202345_20130527T202535_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	134	138	128	10	0
SIR_FDM_2	139	138	0	138	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 Missing QCC Reports

Number of products with missing QCC reports: 2

Product name
CS_OFFL_SIR_FDM_1B_20130526T234753_20130527T001802_B001
CS_OFFL_SIR_FDM_2__20130526T234753_20130527T001802_B001