

1. Overview

Report Production Date:	16-Aug-2013
Data Used:	L1 and L2 Fast Delivery Marine Mode (FDM), and CAL Data

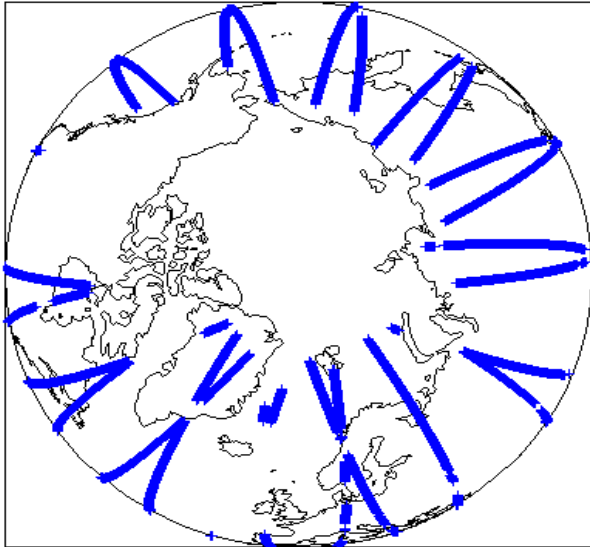
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	Nominal
Correction Error Flags	Nominal
Measurement Confidence Flags	See Sections 5.5, 6.5, 6.6 and 6.8

Mission / Instrument News

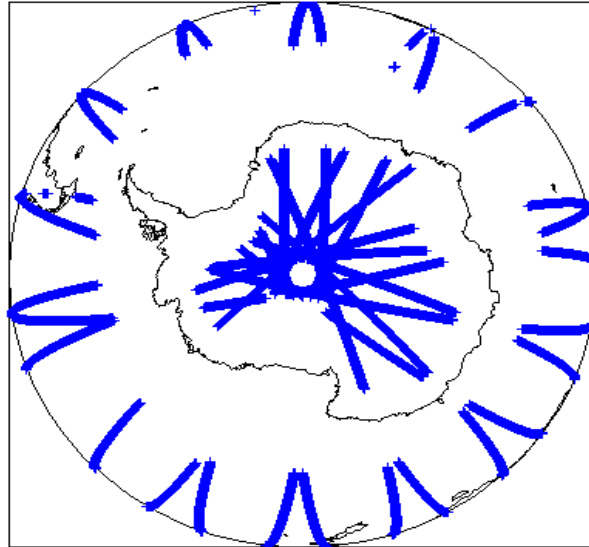
14-Aug-2013	None
15-Aug-2013	SIRAL unavailability from 15-Aug-2013 12:50:49 to 14:39:21 due to a planned orbit manoeuvre.
16-Aug-2013	Nothing planned

2. Global Coverage

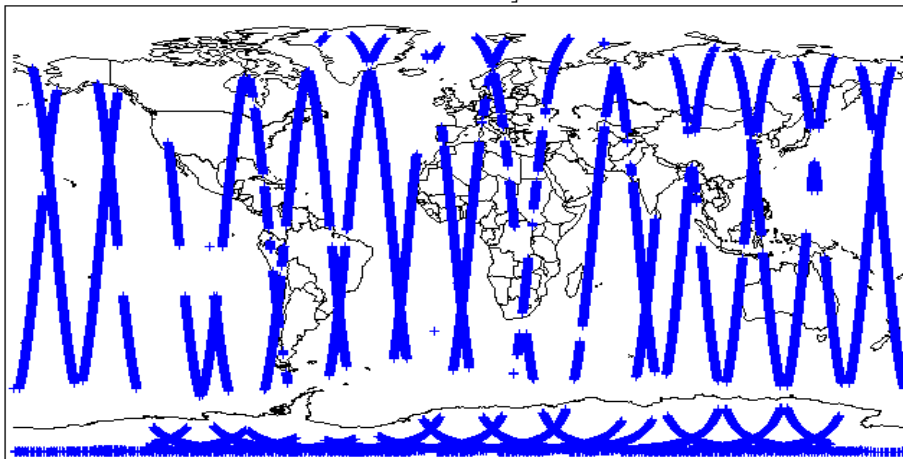
Global Coverage (north pole view)



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 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 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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20130815T012242_20130815T012811_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130815T123723_20130815T124315_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130815T155756_20130815T155826_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130815T192209_20130815T192220_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130815T225107_20130815T225333_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.

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: 5

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130815T012242_20130815T012811_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130815T123723_20130815T124315_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130815T155756_20130815T155826_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130815T192209_20130815T192220_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130815T225107_20130815T225333_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.

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: 2

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130815T161815_20130815T162717_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__20130815T212220_20130815T213254_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__20130815T093917_20130815T095622_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__20130815T111906_20130815T113748_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__20130815T161815_20130815T162717_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__20130815T163000_20130815T165117_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__20130815T212220_20130815T213254_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	139	140	98	42	0
SIR_FDM_2	135	103	0	103	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 Missing QCC Reports

Number of products with missing QCC reports: 32

Product name
CS_OFFL_SIR_FDM_2_20130815T152830_20130815T153332_B001
CS_OFFL_SIR_FDM_2_20130815T154520_20130815T155020_B001
CS_OFFL_SIR_FDM_2_20130815T202734_20130815T204055_B001
CS_OFFL_SIR_FDM_2_20130815T204309_20130815T210018_B001
CS_OFFL_SIR_FDM_2_20130815T211228_20130815T212033_B001
CS_OFFL_SIR_FDM_2_20130815T212220_20130815T213254_B001
CS_OFFL_SIR_FDM_2_20130815T213434_20130815T214819_B001
CS_OFFL_SIR_FDM_2_20130815T215123_20130815T215625_B001
CS_OFFL_SIR_FDM_2_20130815T215632_20130815T215643_B001
CS_OFFL_SIR_FDM_2_20130815T215649_20130815T215659_B001
CS_OFFL_SIR_FDM_2_20130815T215703_20130815T215832_B001
CS_OFFL_SIR_FDM_2_20130815T220459_20130815T220604_B001
CS_OFFL_SIR_FDM_2_20130815T220806_20130815T220839_B001
CS_OFFL_SIR_FDM_2_20130815T221111_20130815T221725_B001
CS_OFFL_SIR_FDM_2_20130815T221946_20130815T222039_B001
CS_OFFL_SIR_FDM_2_20130815T222207_20130815T222214_B001
CS_OFFL_SIR_FDM_2_20130815T222220_20130815T222647_B001
CS_OFFL_SIR_FDM_2_20130815T222810_20130815T223518_B001
CS_OFFL_SIR_FDM_2_20130815T223640_20130815T223844_B001
CS_OFFL_SIR_FDM_2_20130815T225028_20130815T225051_B001
CS_OFFL_SIR_FDM_2_20130815T225107_20130815T225333_B001
CS_OFFL_SIR_FDM_2_20130815T225335_20130815T225457_B001
CS_OFFL_SIR_FDM_2_20130815T225501_20130815T225835_B001
CS_OFFL_SIR_FDM_2_20130815T225838_20130815T225949_B001
CS_OFFL_SIR_FDM_2_20130815T230348_20130815T230459_B001
CS_OFFL_SIR_FDM_2_20130815T230503_20130815T230520_B001
CS_OFFL_SIR_FDM_2_20130815T230548_20130815T232639_B001
CS_OFFL_SIR_FDM_2_20130815T233149_20130815T233542_B001
CS_OFFL_SIR_FDM_2_20130815T233548_20130815T233557_B001
CS_OFFL_SIR_FDM_2_20130815T233603_20130815T233845_B001
CS_OFFL_SIR_FDM_2_20130815T234314_20130815T235355_B001
CS_OFFL_SIR_FDM_2_20130815T235924_20130816T000607_B001