

1. Overview

Report Production Date:	15-Aug-2013
Data Used:	L1 and L2 Fast Delivery Marine Mode (FDM), and CAL Data

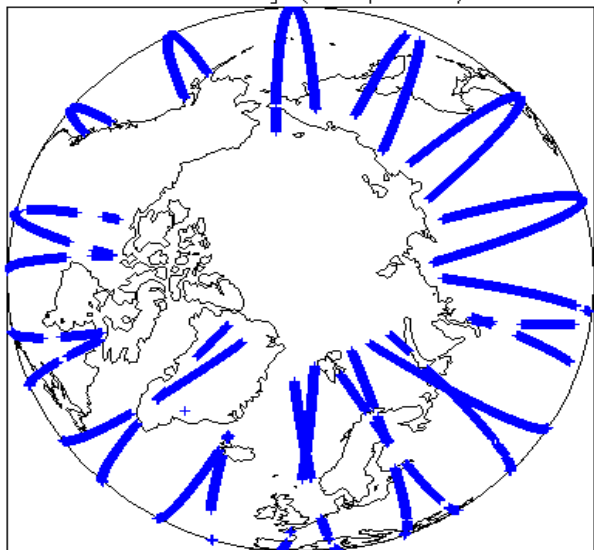
Check	Status
Server check: science-pds.cryosat.esa.int	Nominal
Server check: calval-pds.cryosat.esa.int	Nominal
Product Software Check	Nominal
Product Format Check	Nominal
Product Header Analysis	Nominal
Auxiliary Data File Usage	Nominal
Correction Error Flags	Nominal
Measurement Confidence Flags	See Sections 5.5, 6.5, 6.6, 6.7 and 6.8

Mission / Instrument News

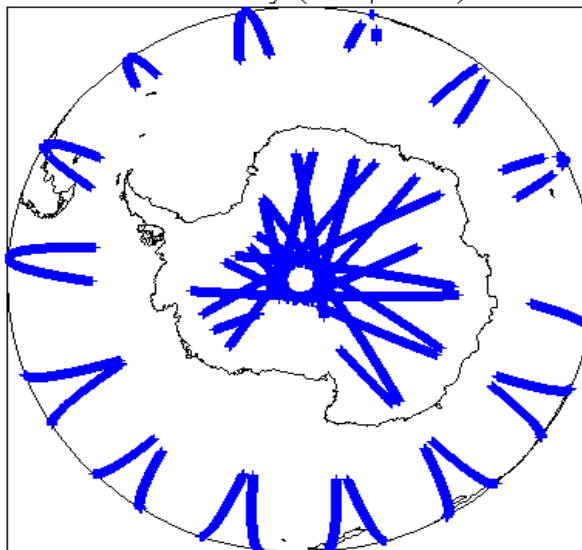
13-Aug-2013	None
14-Aug-2013	None
15-Aug-2013	SIRAL unavailability from 15-Aug-2013 12:50:49 to 14:39:21 due to a planned orbit manoeuvre.

2. Global Coverage

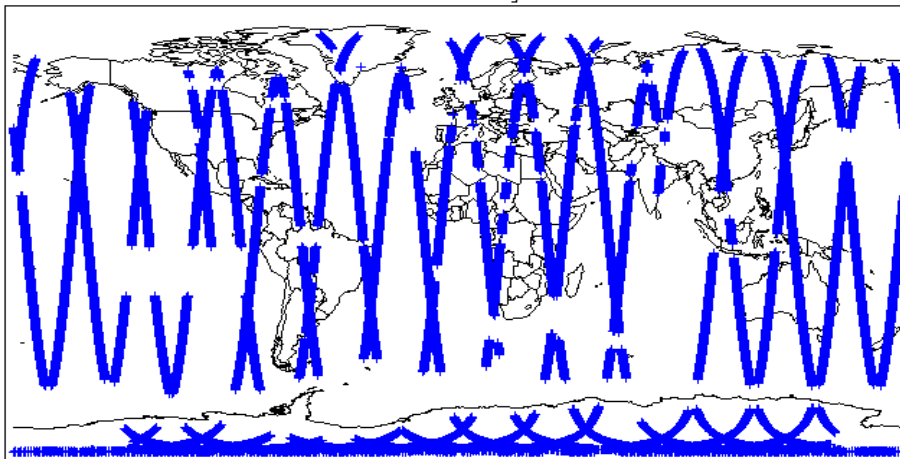
Global Coverage (north pole view)



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 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: 8

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20130814T080228_20130814T083856_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130814T101351_20130814T101859_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130814T121125_20130814T122839_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_1B_20130814T132534_20130814T132731_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130814T132733_20130814T133239_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130814T150905_20130814T151010_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130814T164803_20130814T164940_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20130814T182834_20130814T183129_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__20130814T080228_20130814T083856_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130814T101351_20130814T101859_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130814T121125_20130814T122839_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo.
CS_OFFL_SIR_FDM_2__20130814T132534_20130814T132731_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130814T132733_20130814T133239_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130814T150905_20130814T151010_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130814T164803_20130814T164940_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20130814T182834_20130814T183129_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: 6

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20130814T071107_20130814T071118_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__20130814T151010_20130814T151245_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__20130814T172050_20130814T174151_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__20130814T184548_20130814T184850_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__20130814T202415_20130814T204324_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__20130814T204527_20130814T210005_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__20130814T130609_20130814T132512_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__20130814T014105_20130814T015658_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__20130814T021226_20130814T021736_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__20130814T071107_20130814T071118_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__20130814T092032_20130814T092454_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__20130814T104249_20130814T110525_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__20130814T151010_20130814T151245_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__20130814T172050_20130814T174151_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__20130814T175921_20130814T182345_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__20130814T184548_20130814T184850_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__20130814T194004_20130814T195233_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__20130814T204527_20130814T210005_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	140	88	52	0
SIR_FDM_2	139	105	0	105	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 Missing QCC Reports

Number of products with missing QCC reports: 34

Product name
CS_OFFL_SIR_FDM_2_20130814T183129_20130814T183212_B001
CS_OFFL_SIR_FDM_2_20130814T183300_20130814T183311_B001
CS_OFFL_SIR_FDM_2_20130814T184548_20130814T184850_B001
CS_OFFL_SIR_FDM_2_20130814T184855_20130814T185230_B001
CS_OFFL_SIR_FDM_2_20130814T185619_20130814T192059_B001
CS_OFFL_SIR_FDM_2_20130814T192332_20130814T192859_B001
CS_OFFL_SIR_FDM_2_20130814T192905_20130814T192911_B001
CS_OFFL_SIR_FDM_2_20130814T192918_20130814T193202_B001
CS_OFFL_SIR_FDM_2_20130814T194004_20130814T195233_B001
CS_OFFL_SIR_FDM_2_20130814T195314_20130814T201023_B001
CS_OFFL_SIR_FDM_2_20130814T201157_20130814T201230_B001
CS_OFFL_SIR_FDM_2_20130814T201421_20130814T201556_B001
CS_OFFL_SIR_FDM_2_20130814T202415_20130814T204324_B001
CS_OFFL_SIR_FDM_2_20130814T204527_20130814T210005_B001
CS_OFFL_SIR_FDM_2_20130814T210259_20130814T210756_B001
CS_OFFL_SIR_FDM_2_20130814T210803_20130814T210810_B001
CS_OFFL_SIR_FDM_2_20130814T210816_20130814T210827_B001
CS_OFFL_SIR_FDM_2_20130814T210835_20130814T211014_B001
CS_OFFL_SIR_FDM_2_20130814T211728_20130814T213145_B001
CS_OFFL_SIR_FDM_2_20130814T213400_20130814T214730_B001
CS_OFFL_SIR_FDM_2_20130814T214816_20130814T215021_B001
CS_OFFL_SIR_FDM_2_20130814T220304_20130814T221756_B001
CS_OFFL_SIR_FDM_2_20130814T222450_20130814T223847_B001
CS_OFFL_SIR_FDM_2_20130814T224223_20130814T224708_B001
CS_OFFL_SIR_FDM_2_20130814T224714_20130814T224726_B001
CS_OFFL_SIR_FDM_2_20130814T224732_20130814T224741_B001
CS_OFFL_SIR_FDM_2_20130814T224748_20130814T224939_B001
CS_OFFL_SIR_FDM_2_20130814T225501_20130814T230531_B001
CS_OFFL_SIR_FDM_2_20130814T231101_20130814T232811_B001
CS_OFFL_SIR_FDM_2_20130814T232935_20130814T233031_B001
CS_OFFL_SIR_FDM_2_20130814T234144_20130814T234849_B001
CS_OFFL_SIR_FDM_2_20130814T234852_20130814T234914_B001
CS_OFFL_SIR_FDM_2_20130814T235042_20130814T235140_B001
CS_OFFL_SIR_FDM_2_20130814T235426_20130814T235726_B001