

1. Overview

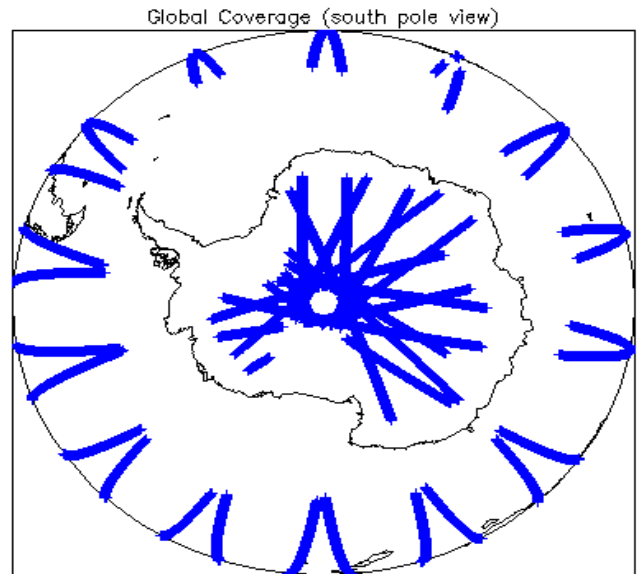
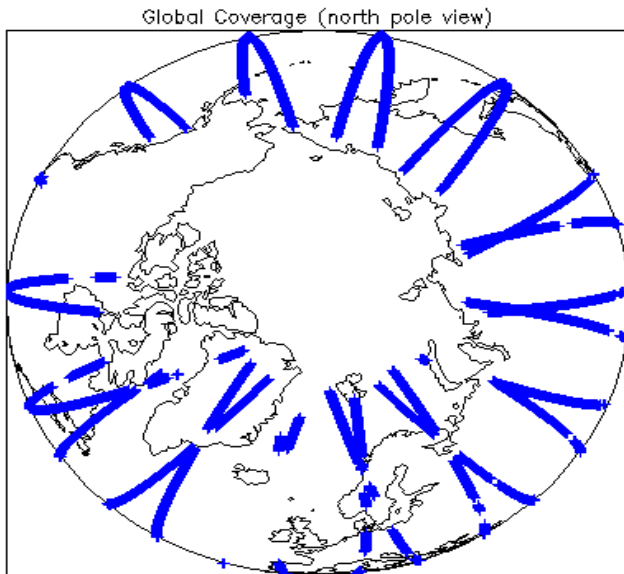
Report Production Date:	17-Oct-2014
Data Used:	L1 and L2 Fast Delivery Marine Mode (FDM), and CAL Data

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	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 and 6.8

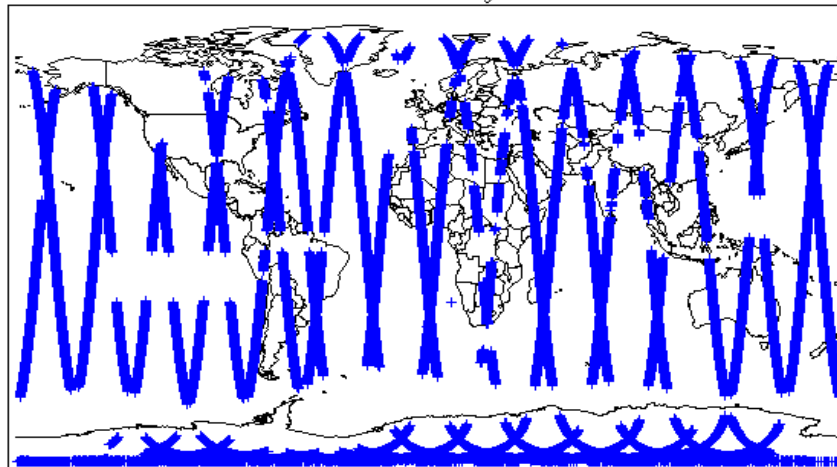
Mission / Instrument News

14-Oct-2014	None
15-Oct-2014	None
16-Oct-2014	Nothing planned

2. Global Coverage



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: 72

Product	AUX File	Comment
All FDM_1B products up to 20141015T120046 onwards (72 products)	CS_OPER_AUXISEAMPS_20141014T180000; 20141015T000000, 20141015T060000; CS_OPER_AUXISURFPS_20141014T180000; 20141015T000000, 20141015T060000; CS_OPER_AUXIU_WIND_20141014T180000; CS_OPER_AUXIV_WIND_20141014T180000; CS_OPER_AUXIWETTRP_20141015T000000	Missing Forecast Auxiliary Files: CS_OPER_AUXISEAMPS; CS_OPER_AUXISURFPS; CS_OPER_AUXIU_WIND; CS_OPER_AUXIV_WIND; 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: 72

Product	Test Failed	Description
All FDM_1B products up to 20141015T120046 onwards (72 products)	Dry tropospheric corection, Wet tropospheric correction, Inverse barometric correction	Due to missing Forecast Auxiliary Files, 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: 7

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20141015T012000_20141015T013349_B001	Cal1. correction from IPFDB	The Cal1 correction has been taken from the IPF DB and not the calibration product.
CS_OFFL_SIR_FDM_1B_20141015T013735_20141015T014219_B001	Cal1. correction from IPFDB	The Cal1 correction has been taken from the IPF DB and not the calibration product.
CS_OFFL_SIR_FDM_1B_20141015T021638_20141015T022321_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20141015T141414_20141015T142246_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_1B_20141015T153220_20141015T153822_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20141015T185307_20141015T185335_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20141015T221716_20141015T221740_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: 72

Product	AUX File	Comment
All FDM_2_ products up to 20141015T120046 onwards (72 products)	CS_OPER_AUXISEAMPS_20141014T180000; 20141015T000000, 20141015T060000; CS_OPER_AUXISURFPS_20141014T180000; 20141015T000000, 20141015T060000; CS_OPER_AUXIU_WIND_20141014T180000; CS_OPER_AUXIV_WIND_20141014T180000; CS_OPER_AUXIWETTRP_20141015T000000	Missing Forecast Auxiliary Files: CS_OPER_AUXISEAMPS; CS_OPER_AUXISURFPS; CS_OPER_AUXIU_WIND; CS_OPER_AUXIV_WIND; 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: 72

Product	Test Failed	Description
All FDM_2_ products up to 20141015T120046 onwards (72 products)	Dry tropospheric correction, Wet tropospheric correction, Inverse barometric correction	Due to missing Forecast Auxiliary Files, 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: 7

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2_20141015T012000_20141015T013349_B001	Cal1 correction from IPF DB, Complex cal1 from IPF DB	The Cal1 correction and Complex cal1 have been taken from the IPF DB and not the calibration products.
CS_OFFL_SIR_FDM_2_20141015T013735_20141015T014219_B001	Cal1 correction from IPF DB	The Cal1 correction has been taken from the IPF DB and not the calibration product.
CS_OFFL_SIR_FDM_2_20141015T021638_20141015T022321_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2_20141015T141414_20141015T142246_B001	Echo error	The Echo Rx1 Error flag is set, indicating a degraded raw echo
CS_OFFL_SIR_FDM_2_20141015T153220_20141015T153822_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2_20141015T185307_20141015T185335_B001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2_20141015T221716_20141015T221740_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: 0

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: 73

Product	Test Failed	Description
All FDM_2_ products up to 20141015T120046 onwards (72 products)	U-Wind, V-Wind component errors	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_20141015T001205_20141015T002655_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_20141015T002910_20141015T004202_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_20141015T004326_20141015T004534_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_20141015T102822_20141015T104040_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_20141015T120247_20141015T121215_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	154	0	0	0	0
SIR_FDM_2	153	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