

1. Overview

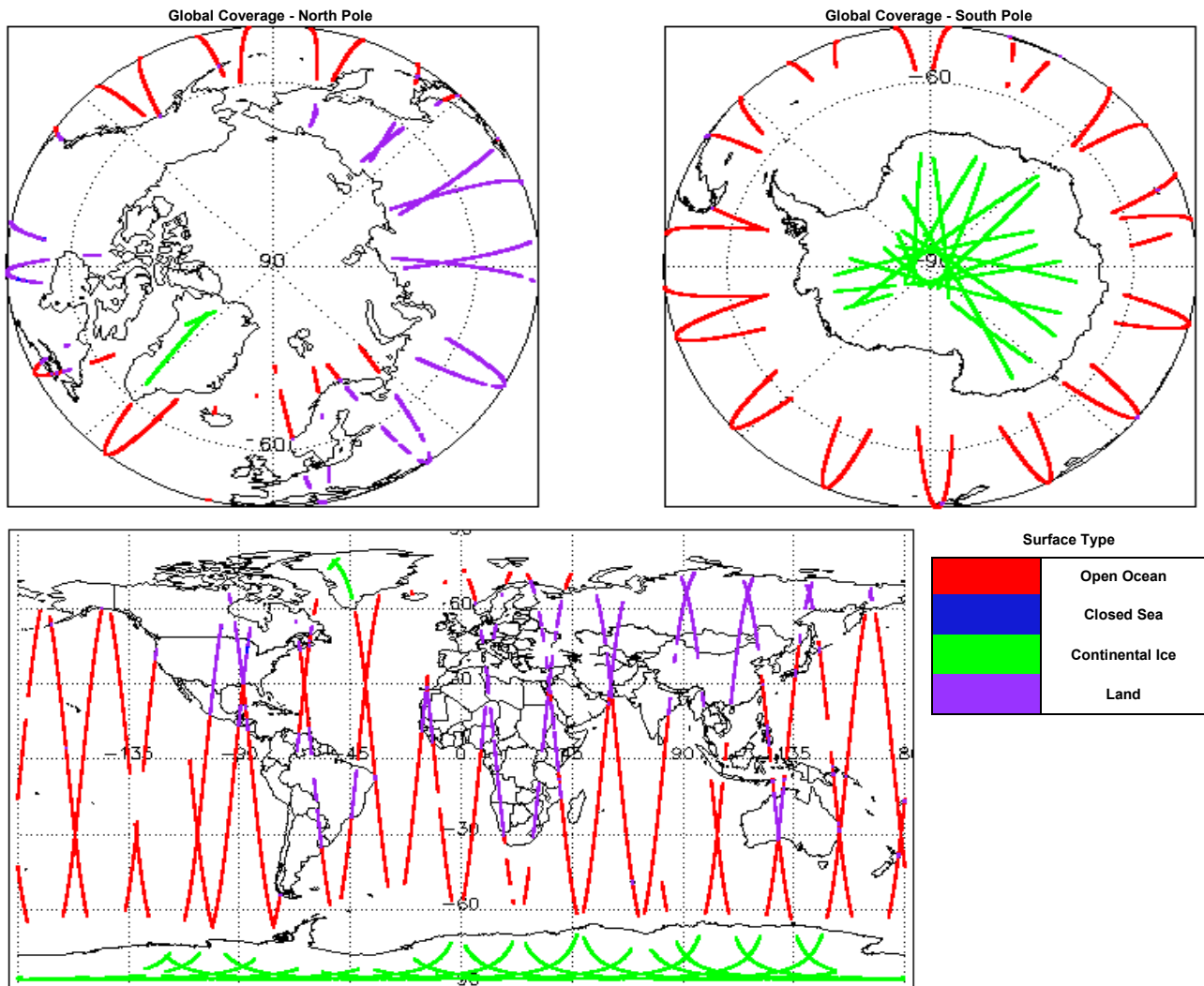
Report Production Date:	08-Dec-2016
Processor Used:	CryoSat Ice Processor
Data Used:	L1 and L2 Fast Delivery Marine (FDM) Mode and L0 Data

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	See Section 4.2
Star Tracker Usage Check	See Section 5.3
Calibration Usage Check	Nominal
Auxiliary Data File Usage Check	Nominal
Auxiliary Correction Error Check	See Section 6.4
Measurement Confidence Data Check	See Section 5.7, 6.5, 6.6, 6.7 and 6.8

Mission / Instrument News

06-Dec-2016	None
07-Dec-2016	None
08-Dec-2016	Nothing planned

2. 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 0 Data Quality Check

4.1 L0 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 L0 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: 10

Product	Test Failed
CS_OPER_SIR1SAR_0__20161207T093244_20161207T093451_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SAR_0__20161207T180606_20161207T181622_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0__20161207T061842_20161207T061931_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR1SIN_0__20161207T214304_20161207T215851_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T162655_20161207T162807_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T135552_20161207T135727_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T210339_20161207T210631_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T113801_20161207T114126_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T212302_20161207T212440_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.
CS_OPER_SIR2SIN_0__20161207T103535_20161207T104011_0001.HDR	Percentage of processing errors detected greater than minimum acceptable threshold.

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 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

Number of products with errors: 3

Product	Test Failed
CS_OFFL_SIR_FDM_1B_20161207T011631_20161207T011934_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20161207T025556_20161207T025650_C001	No Star Tracker file used in the processing of this product
CS_OFFL_SIR_FDM_1B_20161207T043506_20161207T043603_C001	No Star Tracker file used in the processing of this product

5.4 L1B FDM Calibration Usage Check

Each product is checked in order to ensure the necessary calibration files have been used in processing.

Number of products with errors: 0

5.5 L1B FDM Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors: 0

5.6 L1B FDM Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 0

5.7 L1B FDM Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 3

Product	Test Failed	Description
CS_OFFL_SIR_FDM_1B_20161207T011631_20161207T011934_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20161207T025556_20161207T025650_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_1B_20161207T043506_20161207T043603_C001	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 ground-segment processing chain.

Number of products with errors: 0

6.3 L2 FDM Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to 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 Auxiliary Correction Error Check

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: 37

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20161206T235813_20161207T003152_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T004634_20161207T011249_C002	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T022558_20161207T024554_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T030226_20161207T030324_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T031552_20161207T034951_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T043920_20161207T044158_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T050730_20161207T052907_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T054549_20161207T055600_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T055748_20161207T061022_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T063510_20161207T070819_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T072639_20161207T075648_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T081129_20161207T081134_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T081746_20161207T083001_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T083206_20161207T084719_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T092033_20161207T093243_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T100742_20161207T100930_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T101204_20161207T102622_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T104039_20161207T111410_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T131041_20161207T134442_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T141601_20161207T143334_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T144646_20161207T144815_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T145719_20161207T150601_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T162551_20161207T162655_C001	Mean Sea Surface height	There is an error with the Mean Sea Surface Height for one or more records
CS_OFFL_SIR_FDM_2__20161207T163710_20161207T163853_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T171804_20161207T175158_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T181622_20161207T183916_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T185759_20161207T191339_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T191341_20161207T191600_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T191946_20161207T192807_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T194648_20161207T200445_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T203655_20161207T205214_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T205416_20161207T210339_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T212930_20161207T214245_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T215851_20161207T220213_C001	Sea State Bias Correction	There is an error with the Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T221639_20161207T223121_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T230850_20161207T231804_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records
CS_OFFL_SIR_FDM_2__20161207T231807_20161207T234131_C001	Sea State Bias Correction, Altimetric Wind Speed	There is an error with the Altimetric Wind Speed and Sea State Bias Correction for one or more records

6.5 L2 FDM Measurement Confidence Data Check

CryoSat L2 data includes a measurement confidence flag (field 8) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 3

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20161207T011631_20161207T011934_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20161207T025556_20161207T025650_C001	Attitude correction missing	The attitude has not been corrected
CS_OFFL_SIR_FDM_2__20161207T043506_20161207T043603_C001	Attitude correction missing	The attitude has not been corrected

6.6 L2 FDM Range Measurement Check

CryoSat L2 data includes a CFI (field 17) and OCOG (field 22) Range Averaging Status flag for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors: 23

Product	Test Failed	Description
CS_OFFL_SIR_FDM_2__20161206T235813_20161207T003152_C001	CFI Retracked Range Flag	The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records.
CS_OFFL_SIR_FDM_2__20161207T004634_20161207T011249_C002	CFI Retracked Range Flag	The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records.
CS_OFFL_SIR_FDM_2__20161207T022558_20161207T024554_C001	CFI Retracked Range Flag	The master fail flag is set by the CFI call, for one or more records, indicating the values stored in fields #13, #14, #15 and #16 should be ignored for these records.

CS_OFFL_SIR_FDM_2__20161207T194648_20161207T200445_C001	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__20161207T200604_20161207T201956_C001	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__20161207T203655_20161207T205214_C001	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__20161207T205416_20161207T210339_C001	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__20161207T212930_20161207T214245_C001	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__20161207T215851_20161207T220213_C001	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__20161207T230850_20161207T231804_C001	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__20161207T231807_20161207T234131_C001	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 Report Analysis

The Quality Control for CryoSat (QCC) facility 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
SIR1LRM_0_	163	163	163	0	0
SIR1SAR_0_	128	128	128	0	0
SIR1SIN_0_	97	97	96	1	0
SIR2SIN_0_	94	94	93	1	0
SIR_FDM_1B	163	163	163	0	0
SIR_FDM_2	163	163	163	0	0

7.1 QCC Errors

Number of QCC reports with errors: 0

7.2 QCC Warnings

Number of QCC reports with warnings: 2

Product Type	Product Start Time	Total number of occurrences of each warning							
		QF							
SIR1SIN_0_	20161207T214304	x							
SIR2SIN_0_	20161207T162655	x							

Test Description Key:		
Abbreviation	Test name	Details
QF	QualityFlag	This quality flag should be 0

7.3 Missing QCC Reports

Number of products with missing QCC reports: 0